The underlying mechanisms: An investigation of attachment and mentalization within adolescent severe and enduring mental ill health

Rebecca Fisher

PhD

The University of Edinburgh

2011

Declaration

I declare that this thesis is my own work and has not been submitted for any other degree or professional qualification.

Rebecca Fisher Date

Acknowledgements

I would firstly like to thank all the adolescents within CAMHS, Lothian who took part in this research and made it such an enjoyable experience. Their adaptation to life continues to inspire me both personally and professionally.

Secondly I would like to thank all the staff within the tier IV teams, the Early Psychosis Support service (EPSS), the Day Programme and the inpatient unit who enabled me to carry out this work. A special mention has to go to EPSS – my 'secure base' throughout this process.

I would also like to thank Matthias Schwannauer for his supervision during this thesis. His guidance, words of wisdom, sense of humour and occasional coffee induced manic moments have kept me motivated, challenged and certainly entertained. I look forward to many more future collaborations. A big thank you is also reserved for Ethel Quayle and Dr Abbi Noble for their sharp eyes. Abbi also deserves a further mention as a fellow 'modeller' who understands the pain!

My friends and family have been fantastic, as usual, throughout this process and deserve thanks for providing me with hugely needed opportunities of fun, laughter and the odd bit of dancing…

Finally, my most important thank you is for my self proclaimed 'loosely attached' husband who has provided me with endless encouragement, motivation and support. This thesis would not exist without him.

If we knew what it was we were doing, it would not be called research, would it?

Albert Einstein

Remembrance of things past is not necessarily the remembrance of things as they were.

Marcel Proust

Abstract

Background

Regarding adolescence developmental psychopathology and the psychological correlates associated with the onset of severe and enduring mental health in adolescence, this thesis proposes that early attachment related experiences underlie the successful ability to regulate emotions, negotiate interpersonal interactions, assess and utilise social support and develop the necessary mentalizing skills for organizing and understanding both the self and others. Insecure attachment and poor reflective function appear to be linked to clinical samples yet the underlying mechanisms for how these constructs affect adolescent psychopathology and subsequent psychological adaptation have still to be examined.

Objectives

A quantitative cross sectional design was utilised to investigate the following research questions; 1) Is attachment and reflective function directly and indirectly associated with psychological adaptation to mental health difficulties in adolescence? 2) Do emotion regulation, interpersonal difficulties and social support mediate the effect of attachment and reflective function?

Methods

75 participants were recruited from three Tier IV Child and Adolescent Mental Health Services in Edinburgh. They were asked to complete questionnaires measuring the variables of mood, interpersonal difficulties, emotion regulation and social support. The Adult Attachment Interview was administered and coded to ascertain the individual's attachment classification and was scored to measure their levels of reflective function when considering their childhood experiences. Structural equation modelling (SEM) was used to analyse the data.

Results

The emergent clinical picture of this sample was one of adolescents with interpersonal difficulties, moderate distress and poor psychological adaptation. The dominant attachment classification was insecure/ dismissing. The observed level of reflective function indicated that participants could refer to mental states but that these references were not made explicit and their understanding of the intentions of others was likely to be general or superficial.

SEM analysis demonstrated that reflective function significantly and directly predicted psychological adaptation but not low mood. In contrast attachment demonstrated a significant indirect path to adaptation, being fully mediated by internally dysfunctional emotion regulation strategies. These maladaptive emotion regulation strategies directly predicted low mood and indirectly predicted psychological adaptation. In terms of the social support construct, the discrepancy between the support desired and the support received directly predicted adaption and partially mediated the relationship between reflective function and and psychological adaptation.

Discussion

The theoretical implications of the results centred on the importance of investigating the underlying mechanisms of attachment and mentalization in the psychological adaptation of adolescents with severe and enduring mental health difficulties. Emotion regulation, interpersonal difficulties and social support were found to play a significant role in low mood and adaptation thus enhancing the current understanding of psychological distress and chronic difficulties for this population. Further clinical implications were discussed concerning the recommendation of promoting and utilizing a mentalization based approach when working with clinical adolescent populations.

Contents

Section 1

An introduction to attachment theory, mentalization, emotion regulation and social support.

Section 2

Study design and methodology

Section 3

Results and analysis

Section 4

The implications of an attachment and mentalization based understanding of adolescent psychopathology

Tables

Figures

Appendices

Appendix 1 – Published work

Macbeth, A., Gumley, A., Schwannauer, M. & Fisher, R. (2011) Attachment states of mind, mentalization and their correlates in a first episode psychosis sample. *Psychology and Psychotherapy: Theory, Research and Practice* 84, 42-57.

Appendix 2 - Ethics

Letter confirming ethical approval from NHS Lothian

Letter confirming ethical approval for amendments made

Letter confirming management approval from local R&D site

Participant Information Sheet

Participant Consent Form

Appendix 3 - Measures

Assessment Proforma

Demographic form

Significant Others Scale*) (Power, M.J., Champion, L.A. & Aris, S.J., 1998)*

Inventory of Interpersonal Problems – 32 *(Horrowitz et al., 2000)*

Adolescent Coping Scale *(Frydenberg & Lewis 1993)*

Life Events Inventory *(Brown & Harris, 1989)*

World Health Organisation Quality of Life *(WHO QOL BREF)*

Beck Depression Scale II *(Beck, Steer & Brown, 1996)*

Regulation of Emotions Questionnaire 2 *(Phillips & Power, 2007)*

Social Support Questionnaire *(Sommer & Fydrich, 1991)*

Adult Attachment Interview Protocol (*George, Kaplan & Main., 1985)*

Appendix 4 – Adult Attachment Interview

AAI Training Institute Attendance Certificate

Confirmation letter of 3 way reliability in coding the AAI

Appendix 5 – Distribution of data

Section 1

An introduction to attachment theory, mentalization, emotion regulation and social support.

Introduction

The complex nature of developmental psychopathology demands a fuller assessment of how different concepts and theories combine to explain individual differences in adaptation and outcome in the context of mental health difficulties. The aim of this section, therefore, is to introduce the reader to the constructs considered integral to adolescent psychopathology.

From the position of general systems theory, whereby a system is characterised by the interactions of its components in a number of non linear relationships (von Bertalanffy, 1968), the individual represents a unique system that, in this thesis, is hypothesised to be founded on early attachment related experiences. Adolescence is the period seemingly dominated by an individual's attempt to separate and individuate away from their parents. This period of great transition is where the individual develops a more definitive sense of self and other (Bowlby, 1973) through the development of formal operational thinking that provides new opportunities to reflect on experiences (Main et al., 1985). Adolescents utilize logic and reasoning at this stage and subsequently use this template to assess their relationships with all that surround them including peers as well as immediate attachment figures. Throughout adolescent development an individual strives to establish self, other and sexual identities which can involve many forms of experimentation in interactions with family, peers and teachers. However, in normal development autonomy develops not at the expense of the relationship with the parent but within the context of secure attachment relationships that will remain beyond this developmental period (Allen, Hauser, Bell & O'Connor, 1994; Allen & Land, 1999) and still provide a secure base for teenage exploration (Bowlby, 1969/1982).

As the sense of self and other develops in adolescence, so does the individual's internal working model where childhood structures are reorganised and updated as part of this maturational process (Kobak & Cole, 1994) and more complex representations of relationships develop (Crittenden, 1997). In the development of significant peer and romantic relationships the adolescent carries the distinction of their relationship with attachment figures yet can recognize these relationships may no longer meet all their needs (Kobak & Cole, 1994) and there might be others better placed to do so (Allen & Land, 1999).

Cooper, Shaver and Collins (1998) suggest that, in addition to these transitions, this developmental period also sees adolescents engage in exploratory behaviour that whilst developmentally appropriate is often considered risky (e.g. sexual relationships, substance use). These behaviours that are occasional or transitory are considered 'normal' for this developmental period and are often resolved by early adulthood (Steinberg & Morris, 2001). However, little remains known about the mechanisms differentiating those with temporary or transient difficulties and those with more prolonged or psychopathological difficulties. There needs to be, therefore, consideration or both normal adolescent development and abnormal development. As Steinberg and Morris (2001) have pointed out,

'...much of what we learn about atypical development in adolescence informs our understanding of normal adolescent development' (p.86)

Within the framework of attachment theory (Bowlby 1969/1982, 1973, 1980) and mentalization (Fonagy, Geregley, Jurist & Target, 2004) the emergence of psychopathology is considered to occur within this developmental system where there are failures or difficulties in negotiating formative tasks within adolescence (Cicchetti & Cohen, 1995). Moreover, it is proposed here that there is no singular cause for outcome within this system but instead, a number of mechanisms mediate and moderate the relationship between attachment and mentalization in respect to adaptation and are proposed to be emotion regulation and social support (Sroufe, Coffino & Carlson, 2010). These underlying mechanisms will aid our understanding of the equifinality or multifinality of pathways that lead to psychopathology in adolescence by examining how developmental changes are incorporated into existing attachment models where early experiences are proposed to influence subsequent experiences (Sroufe, Egeland, Carlson & Collins, 2005). As Sroufe, Carlson, Levy and Egeland 1999 suggest,

"Early experience often plays a crucial role in the development dynamic that yields pathology, but this role is dependent on a surrounding context of sustaining environmental supports". (p.2)

Considering the experiences of young people along a continuum allows us to contemplate that they can move between pathological and non pathological forms of functioning (Glick & Zigler 1986). Protective factors are known to moderate risk (Rutter, 1990) and because increasing numbers of risk factors correlate to poorer outcome (Rutter, 2000; Sameroff, 2000) the constructs described above will be examined for their protective qualities which may facilitate better adaptation and move the individual from pathological to non pathological experience.

Due to the complex nature of attachment theory Part I of this section will delineate the development and construct of attachment theory that originated in Bowlby's seminal trilogy, 'Attachment (1969/1982)', 'Separation: Anxiety and Anger (1973)' and 'Loss: Sadness and Depression (1980)'. It will also demonstrate how attachment theory has been operationalised into a measurable construct through the concept of internal working models. Following this will be an examination of the measures used to assess attachment with empirical evidence provided of studies utilising particular methodologies. The next part of the chapter discusses the relevance of attachment theory to the development of psychopathology and will concentrate on the empirical evidence from general clinical populations and then secondly, and most importantly, on the period of adolescence. In addition, the constructs of emotion regulation and social support will be introduced within the context of attachment theory and their potential roles as underlying mechanism that mediate the relationship between attachment, psychopathology and adaptation.

The construct of mentalization has developmental roots within attachment relationships (Fonagy, Geregley, Jurist & Target, 2004) and is integral to the explanation of the association between attachment and psychopathology. Therefore, Part II of this section will describe the theoretical foundations and implication of mentalizing in the adaptation to psychopathology. This will be followed by outlining the measures used to assess the construct and a discussion of the empirical evidence of mentalization and adaptation and outcome in psychopathology.

The distinct lack of literature focussing on emotion regulation in adolescence led to a decision to incorporate a critical review of the current evidence base. Part III will, therefore, consider the empirical literature on emotion regulation in clinical adolescent samples. Finally, the intrinsic importance of interpersonal relationships to attachment, mentalization and emotion regulation highlights the necessity to investigate the theoretical and empirical concept of social support. How this enhances the understanding between attachment, mentalization and adaptation will be discussed in part IV in terms of the role of interpersonal interactions as a potential mediator or moderator underpinning this relationship.

These four parts will be brought together at the end of the section with Part V outlining the main conclusions from this literature which will be followed by the research questions this thesis will endeavour to answer.

Part 1 Attachment

1.1 Bowlby and the development of attachment theory

Bowlby (1969/1982, 1973, 1980) developed attachment theory to investigate the process of both normal and atypical development. He proposed a biologically based behavioural 'controls system' whereby at times of threat and distress, a series of behaviours by the infant (including crying, clinging etc.) serve to maintain proximity and accessibility to their primary attachment figure (the set goal) resulting in protection within the environment (the function of the system). If the caregiver is available and responsive this system becomes organised over time and it is this organisation that is considered attachment. Within this 'goal corrected' system innate attachment behaviours activate when the threshold for distance and accessibility has been reached and the infant experiences distress, and only stop when the goal is met (e.g. proximity to the caregiver). This is a finely balanced system which is reliant on infant-caregiver interaction where the caregiver responds both accurately and sensitively to the distress signals from their infant. In doing so they become a secure base from which the infant learns to explore and attempts to master their environment yet can still seek comfort at times of threat (Kobak & Sceery, 1988). Consequently, the goal of the attachment system is to regulate negative affect and maintain equilibrium. Where this occurs consistently within the individual it is termed 'secure attachment'.

This is a fluid process between the dyad but, as Bretherton (1992) highlights, having a flexible system of adaptation can also lead to less than optimal development. This is where an infant does not experience their caregiver as a secure base at times of distress, where their attempts, or behaviours, to achieve their goal of proximity have been met with rejection or inconsistency. Where rejection has occurred, the behaviours that serve attachment are terminated prematurely in an independent attempt by the infant to deactivate their attachment system and avoid feelings of distress as they learn their needs will not be met. Where responses are predominantly inconsistent, the infant does not terminate their attachment behaviours. In these two scenarios of either rejection/ inconsistency the behaviour utilized by the infant is considered organised because they represent a coherent strategy to achieve equilibrium and regulate distress. However, these behaviours are also termed as 'insecure attachment' because exploration and proximity seeking are adversely affected. In the case of the rejected infant proximity seeking is avoided and exploration is limited and with the case of the infant receiving inconsistent responses exploration is hampered because of an over exaggeration of proximity seeking. These concepts are usefully explored through

experimental settings to provide tangible evidence to support the theoretical construct. These attachment types will be discussed in further detail below.

Mary Ainsworth (1968) provided the empirical evidence for Bowlby's attachment theory through extensive naturalistic studies and narrative reports of infant-caregiver attachments in Uganda first, then Baltimore. Ainsworth and colleagues found that sensitivity of the mother in play, feeding, physical contact and distress episodes predicted the quality of the mother infant relationship in the fourth quarter of the infant's first year. From her work the Strange Situation Procedure (SSP; Ainsworth, Blehar, Water & Wall, 1978) was developed to assess how infants reacted in terms of attachment and exploratory behaviours during times of high and low stress where reunion behaviours with the primary caregiver became an area of particular focus. Operationalising infant attachment through the SSP Ainsworth and colleagues (1978) developed the following protocol in an attempt to deliberately activate the attachment system of the infant and to assess how they respond to their own distress. Initially a caregiver and infant are in a room with toys where they are joined by a stranger. Whilst the stranger engages with the infant, the caregiver leaves the room to return a short time later. The stranger then leaves followed by the caregiver. The stranger then re-enters the room and attempts to engage the infant. They are then subsequently joined by the caregiver. Ainsworth and colleagues (1978) developed a classification system to demarcate the very different interactions they observed and proposed that, even by infancy, an individual has already organised their attachment behaviours into either 'secure' or 'insecure' attachment behaviours.

Infants termed 'secure' used their primary caregiver (usually their mother) as a base from which to explore the environment and utilised verbal, visual and physical contact to maintain proximity. They engaged in play and were wary of the stranger when attempting to interact with them. These infants would be distressed at the departure of the mother and would generally resist the attempts of the stranger to settle them. When the mother returned, these infants would actively seek them out and were easily comforted before returning to play. The authors postulated that these infants have experienced the caregiver as available and able to meet their needs consistently and appropriately. Thus they formulate their caregiver as a secure base from which they can explore and return to thus achieving the goal of 'proximity' and mastery of the environment. Studies have shown these infants demonstrate more positive affect, persistence in problem solving when toddlers (Matas, Arend & Sroufe, 1978) and flexible responses in pre school years (Sroufe, 1983).

Ainsworth and colleagues termed all other infants as 'insecure' and broke this down into two categories; Anxious/ avoidant and anxious/ ambivalent. 'Anxious/ avoidant' infants displayed less exploration than the secure infants and also referred less to their mother during play. They did not become distressed at her departure and would actively avoid or ignore her on return. There was no differentiation in the treatment of the stranger or caregiver during interactions and the infants would display far less emotional reactions. It is suggested that these infants have experienced their caregivers as unavailable, where their attempts to communicate their needs have been consistently met with rejection and the infant learns they cannot influence their caregiver. Indeed, evidence from the Baltimore study found the mothers of avoidant infants were insensitive to their signals in the first three months of life and who also stated their dislike of physical contact both verbally and behaviourally (Blehler, Lieberman & Ainsworth, 1977; Tracy & Ainsworth, 1981). These avoidant infants learn that only they can influence their levels of distress so consistently deactivate their attachment system to avoid these experiences. They therefore demonstrate poor exploration and 'over regulate' their emotions resulting in less emotional expression. Subsequently the infant behavioural patterns in the Strange Situation become independent of the caregiver. Thus these infants have a high threshold for the activation of the attachment system.

Conversely, the other group of infants deemed to be insecure were termed 'anxious/ ambivalent' who demonstrated anxiety that limited their exploration and play even when the mother was present. They were extremely distressed on the mother's departure and not easily soothed on her return demonstrating ambivalent reunion behaviours when their mother initiated interaction (e.g. seeking attention yet actively resisting). Evidence from the Baltimore study showed these infants had experienced inconsistent responses from their caregiver where interactions were responsive and sensitive at times but insensitive at others where the infant's needs were ignored (Ainsworth et al, 1978). This leaves the infant unable to regulate their emotions on their own and demonstrate higher levels of distress than other infants in an effort to make sure their needs are met by their caregiver. However, when their needs are met, it does not provide the same secure base as experienced by those infants deemed 'secure' because the infant is not confident of a consistent response from their caregiver. Consequently this affects their exploration and self confidence in new environments (Ainsworth et al., 1978). These ambivalent infants consistently demonstrate a low threshold for the activation of the attachment system.

Ainsworth's colleague Mary Main developed a fourth category to the Strange Situation labelled as 'Disorganised/ disorientated attachment' (Main & Soloman, 1990). These infants displayed particularly unusual reunion behaviours when their mothers returned to the room such as freezing, collapsing prone to the floor or approaching their mother backwards. Main and colleagues (1990) suggest these infants have found their caregivers as primarily frightening or frightened [1] which results in these disorientated behaviours reflecting a temporary breakdown in the infants usual 'organised' strategy of secure or insecure attachment behaviours. This unusual behaviour may only last for a few moments in the SSP and then the infant usually reverts back to their 'organised' attachment strategy. Thus children primarily categorised as disorganised will also have a secondary 'best fit' category of secure or insecure (Hesse & Main, 2000).

Whilst appearing to be detrimental to the development of successful caregiver interactions, the strategies adopted by infants in both insecure and disorganised categories can be regarded as adaptive. Instead of trying to achieve comfort through their caregiver they are actively attempting to defend themselves from the perceived failure of the caregiver (Dozier, 1990) or, in the case of disorganised infants, from the frightened or frightening caregiver. Effectively these infants are engaging in these behaviours for the same reason as the secure infants, in that they are trying to reduce their levels of distress. Yet as Cicchetti, Cummings, Greenberg and Marvin (1990) comment, these strategies should not be considered competent in that they increase the vulnerability to psychopathology. This vulnerability develops from an infant forming and utilising internal representations of themselves and others that lead to maladaptive coping at times of distress, representations which they take forward into future development.

1.2 Internal Representations

To explain how childhood attachment experiences with primary caregivers effect an individual's experiences throughout their life span Bowlby (1977) proposed that the internal representations formed from childhood attachment experiences are central in the construction of what he termed 'internal working models' and are central to the regulation of the attachment system (Zimmermann, 1999). Bowlby (1968, 1980) proposed that these internal representations of self and other continue to influence both existing and new

[1] This is often due to the parent themselves having experienced loss or trauma and not being able to contain their own distress during interactions with their infants. It is often referred to as a second generational effect (Hesse & Main, 2000).

relationships across the lifespan affecting cognition, emotion and behaviour in attachment relevant contexts (Ainsworth, 1978; Bowlby, 1973, 1988; Bretherton, 1985).

Internal working models initially develop from behavioural interactions with the caregiver until the individual moves from procedural organisation, where proximity and access to the caregiver is necessary for distress tolerance, to evaluative organisation where reliance is on more explicit evaluations regarding the availability of the caregiver. The individual develops an internal representation or model of themselves and others based on their experience of the availability, consistency and met expectation of their caregiver that form a cognitive and emotional framework for each individual to process new information and regulate both their behaviour and emotions in response to the arousal of distress (Zimmermann, 1999). Essentially, these models can be considered to provide a set of rules or templates that guide an individual through future interactions and relationships with others and the environment. However, Bowlby (1988) proposed that these internal working models occur largely outside conscious processing so the importance of understanding early attachment experiences are crucial considering that individuals interpret events, evaluate outcomes and generate alternative interpretations throughout their life span subject to the biases of their working model (Collins & Read, 1990; Lapsley, Varshnet & Aalsma, 2000). Furthermore, whilst information is assimilated to existing internal models and become increasing complex (Bretherton, 1985) they remain fundamentally true to the original model, resistant to change particularly at times of distress, and shape future interpersonal interactions (Bowlby, 1980; Main, Kaplan & Cassidy, 1985).

Bowlby (1977) developed and conceptualised the idea of internal working models but to have utility, a more pragmatic model was required to translate these inner representations into an interpersonal context. In a reductionist model, Bartholomew and Horowitz (1991) attempted to do this and conceptualised them as dichotomous models of self and others and described prototypic forms (see figure 1.1). To explain the authors model let us consider the attachment experiences of the individual. A secure attachment that has developed by childhood is reflected in an internal working model where both the self and others are valued, that availability from others is expected and reassurance provided and that there is self confidence in the ability to self regulate distress. Bartholomew and Horowitz (1991) described this in their model as an individual having a positive model of themselves and others where they are ‘comfortable with intimacy and autonomy’. The insecure category of dismissing is represented in an internal model where there is confidence in self soothing but

a belief that others cannot or will not help. This is the internalisation of the individual perceiving their needs and attachment behaviours to have been rejected by their primary caregiver. In their model, Bartholomew and Horowitz (1991) described this as having a positive view of self but a negative view of others where an individual is 'dismissing of intimacy and counter dependent'. Conversely, the internal working model of an individual with a preoccupied attachment style is one of low self confidence but high belief in others to manage their distress, an internalisation of perceived inconsistent caregiving experiences where they learnt they could not regulate their distress and had to rely on others. This has been termed as having a negative view of self and a positive view of others where the individual is 'preoccupied with relationships' (Bartholomew & Horowitx, 1991). The final category of 'unresolved/ disorganised' has an internal working model where the individual has low confidence in the ability of both themselves and other to soothe their distress, developed from experiences of loss or abuse with their attachment figures leaving them with a fragmented attachment strategy. This can occur where the attachment figure is both a source of comfort and fear for an individual causing a 'disorganising' effect on attachment behaviours whereby the individual simultaneously wants to be near to, and flee from their attachment figure. Bartholomew and Horowitz (1991) described this as a 'fearful' internal working model where the individual holds a negative view of both themselves and others where they are 'fearful of intimacy and socially avoidant'.

		Model of Self (Dependence)	
		Positive (Low)	Negative (High)
Model of Other (Avoidance)	Positive (Low)	**SECURE** Comfortable with intimacy and autonomy	**PREOCCUPIED** Preoccupied with relationships
	Negative (High)	**DISMISSING** Dismissing of intimacy. Counter-dependent	**FEARFUL** Fearful of intimacy. Socially avoidant

Figure 1.1 Model of attachment (Bartholomew and Horowitz, 1991)

1.3 Measures of attachment

Due to the influential nature of attachment theory, the measurement tools developed to operationalise it have been vast in number and utilise both observer rated and self reported assessment of attachment. Ravitz, Maunder, Hunter, Sthankiya and Lancee, (2010) conducted a comprehensive 25 year review and proposed that all attachment measures attempt to capture emotion regulation, behavioural strategies and the interpersonal awareness of individuals in relation to current relationships. However questions remain of whether attachment is best measured in categorical domains or dimensions which will be discussed in detail later (Crowell, Fraley & Shaver, 1999; Fraley & Waller, 1998; Ravitz et al., 2010). It has also been proposed that through the use of theoretically diverse measures, attachment research is dividing into two separate areas; one of social psychology where adults are required to assess their current adult relationships in context of attachment related thought, feelings and behaviours. The other is rooted in developmental psychology using observer rated assessments that require an individual to consider their childhood relationships with primary caregivers where conscious and subconscious processes are targeted by the questions and analysis is reflected in the classification of their current state of mind with respect to attachment (Fortuna & Roisman, 2008). Already these approaches demonstrate potential discrepancies between measures. The former use self report measures of current self awareness, and therefore less likely to pick up defensive distortion of reply (Ravitz et al, 2010), and in the latter case it is the quality of the narrative that is assessed rather than the actual report of experiences. It would be erroneous to compare the results of self report measures that target conscious processing to those that aim to measure subconscious processing through interview and observer led assessments (Scott Brown and Wright, 2003). Indeed, Roisman et al. (2007) found the two approaches to only share a very small empirical overlap and effect size ($r=0.09$, meta analytic $N=961$) in a recent meta analysis.

In terms of observer rated interviews the Adult Attachment Interview (AAI: George, Kaplan & Main, 1985) has excellent psychometric properties and is considered the ‘gold standard’ in current day attachment research (Ravitz et al. 2010). For self report attachment measures the field is more open but divide into those looking at romantic relationship, close relationships (friends, family and romantic relationships) and early experiences with parents. This section will discuss the AAI and self report measures focusing on close relationships or early experiences.

1.3.1 The Adult Attachment Interview

The Adult Attachment Interview (AAI), conceptualised and developed in the early 1980s by George, Kaplan and Main (1985), was designed to classify an adult's attachment through the exploration of their representations of childhood attachment experiences. It was the first tool to provide constructs of adult attachment classifications by capturing an individual's generalised representation of attachment. It examines the working models held by adults in relation to their attachment experiences in childhood by utilising a semi-structured interview that is rated on the narrative collaboration and coherence of the speaker (Hesse, 1999) and how successfully they have integrated their understanding of the parent child relationship (Kobak & Sceery, 1988). This is not an easy task to undertake and aims to 'surprise the unconscious' (George, Kaplan & Main, 1996). As Kobak and Sceery (1988) state,

"The link between working models of attachment and affect regulation is particularly evident when the Adult Attachment Interview is viewed as a task that requires representing and reflecting upon distressing events that would typically activate the attachment system" (p.142).

The coding system developed by Main, Goldwyn and Hesse (2002 version 7.1) provides the following classifications; *secure/ autonomous (F), insecure/ dismissing (Ds), insecure/ preoccupied (E), unresolved (U)* and *Cannot Classify (CC)*. These groups parallel the infant attachment classifications from the strange situation[2] (Ainsworth et al. 1978; see table 1.1) where the internal working models of the infant are reflected in the internal working model of adults. The AAI classifications are both predictive of the attachment of the adult's infant (in the SSP) and predictive of the parent's quality of interaction with their child thus maintaining attachment patterns across the generations (Rosenstein & Horowitz, 1996). These states of mind represent the internal working models of the individual that provides a guide for subsequent interactions from adolescence and throughout adulthood.

The AAI is based on the co-operative principles of Gricean maxims that were developed from the pragmatics of language and how to make oneself understood. There are four principle maxims that the AAI bases its coding framework on:

1) 'Quality' – be truthful and have evidence for what you say.

2) 'Quantity' – provide as much information as is necessary in conversations, do not provide too much or too little.

[2] With the exception of 'Cannot Classify' (see Hesse 1996) because there is no such category in the SSP so comparisons cannot be made.

3) ‘Relevance’ – be relevant in what you are saying.

4) ‘Manner’ – be clear in what you have to say, avoid ambiguity, prolixity and have order.

A speaker coded as *secure* is able to provide coherent, collaborative narrative regarding their childhood experiences, have integrated these experiences and are valuing of the role of attachment in adaptation and functioning. These individuals may have experienced positive, negative or a mixture of life events throughout their childhood and life and are the group least likely to resemble each other (Main, Goldwyn & Hesse, 2002). A speaker coded as *insecure/ dismissing* is unable to provide a coherent description of their childhood. They describe difficulty in recalling childhood events, dismiss or devalue attachment relationships, idealise their primary caregivers and minimise the impact of negative event in their lives. Their narratives tend to be brief and unelaborated with the perception of the coder being that they have yet to fully integrate their attachment experiences. These speakers commonly violate the maxim of quantity, by being too succinct, and quality, by not providing evidence for what they say. Individuals who are coded as *insecure/ preoccupied* are also unable to provide coherent narrative but in differing ways. These speakers appear to be still caught up in attachment relationships either through a long, passive and enmeshed narrative or through an angrily preoccupied narrative with demonstrations of current and ongoing anger. These speakers commonly violate the maxim of quantity, through lengthy conversational turns, and relevance, often digressing into an angry discourse or repeatedly bringing the present into discussions of the past. Assessing these three categories is known as ‘3 way analysis’ where placement is made into F, Ds or E categories.

The fourth category of *unresolved* is specifically coded in relation to the loss of, and/ or abuse from primary attachment figures. These speakers demonstrate lapses in the monitoring of their discourse or speak in odd, bizarre ways when discussing losses or abuse (e.g. discussing deceased people as though still alive). Similarly to the disorganised category for infants in the SSP, the unresolved category is also followed by placement in the predominant ‘organised’ strategy of secure or insecure because an unresolved state of mind with regard to attachment is usually limited to the narrative regarding loss and/ or abuse (George et al., 1996). When incorporating the U classification in coding, analysis becomes known as ‘4 way’ coding where the dominant disorganised strategy is recorded; U followed by the underlying organised state of mind e.g. U/F

Table 1.1 Classifications and Corresponding Patterns of Infant Strange Situation Behavior

Adult state of mind with respect to attachment	**Infant strange situation behavior**
Secure/ Autonomous (F)	**Secure (B)**
Coherent, collaborate discourse. Valuing of attachment, but seems objective regarding any particular event/ relationship. Description and evaluation of attachment related experiences is consistent, whether experiences are favourable or unfavourable. Discourse does not notably violate any of Grice's maxims.	Explores room and toys with interest in preseparation episodes. Shows signs of missing parent during separation, often crying by the second separation. Obvious preference for parent over stranger. Greets parent actively, usually initiating physical contact. Usually some contact maintaining by second reunion, but then settles to return to play.
Dismissing (Ds)	**Avoidant (A)**
Not coherent. Dismissing of attachment related experiences and relationships. Normalizing ("excellent, very normal mother"), with generalized representations of attachment history unsupported or actively contradicted by episodes recounted, thus violating Grice's maxim of quality. Transcripts also tend to be excessively brief, violating the maxim of quantity.	Fails to cry on separation from parent. Actively avoids and ignores parent on reunion (i.e. by moving away, turning away, o r leaning out of arms when picked up). Little or no proximity or contact-seeking, no distress and no anger. Responses to parent appear unemotional. Focuses in toys or environment throughout the procedure.
Preoccupied (E)	**Resistant or Ambivalent (C)**
Not coherent. Preoccupied with or by past relationships/ experiences, speaker often angry, passive or fearful. Sentences often long, grammatically entangled, or filled with vague usages ("dadadada", "and that"), thus violating Grice's maxims of manner and relevance. Transcripts often excessively long, violating the maxim of quantity.	May be wary or distressed even prior to separation, with little exploration. Preoccupied with parent throughout procedure; may seem angry or passive. Fails to settle and take comfort in parent on reunion, and usually continues to focus on parent and cry. Fails to return to exploration on reunion.
Unresolved/ Disorganised (U)	**Disorganised/ Disorientated (D)**
During discussions of loss or abuse, individual shows striking lapse in the monitoring of reasoning or discourse. For example, individual may briefly indicate a belief that a dead person is still alive in the physical sense, or that this person was killed by a childhood thought. Individual may lapse into prolonged silence or eulogistic speech. The speaker will ordinarily otherwise fit Ds, E or F categories.	The infant displays disorganised and/or disorientated behaviours in the parent's presence, suggesting a temporary collapse of behavioural strategy. For example, the infant may freeze with a trance like expression, hands in the air; may rise at parent's entrance, then fall prone and huddled on the floor; or may cling while crying hard and leaning away with gaze averted. Infant will ordinarily otherwise fit A, B or C categories.

(replicated from Hesse (1998) The Adult Attachment Interview: Historical and Current Perspectives in J. Cassidy & P.R. Shaver (Eds.) *Handbook of Attachment* New York: Guildford p.399)

A fifth category on the AAI labelled as *'Cannot Classify' (CC)* has been proposed and represents a breakdown in the global attachment strategy (Hesse, 1996). This is where an individual demonstrates two highly contrasting attachment styles within the same interview (Ds and E for example) or where their narrative does not indicate an organised stance throughout the entire interview. Whilst relatively uncommon in low risk samples, CC is prominent in psychiatric disorder, criminal and domestic violence and individuals who have experienced sexual abuse (Hesse, 1996). For example, Allen, Hauser and Borman-Spurrell (1996) found 25.8% of previously hospitalised young adults were categorised as CC compared to 6.6% of sociodemographically similar high school students without psychiatric history. Also, 27% of criminal offenders in a Dutch sample were found to have CC attachment (Van IJzendoorn et al., 1997). Where CC is incorporated in analysis coding becomes known as '5 way' where the dominant strategies of CC, U, F, D or E could be the primary category placement.

1.3.1.1 Stability, validity and distribution of the AAI

The AAI has uniquely high stability plus discriminant and predictive validity in both clinical and non clinical populations. Test-retest reliability for 3 way classification in normal populations ranges from 78% reliability across two months (Bakermans-Kranenburg & van IJzendoorn, 1993) to 90% across three months (Sagi et al., 1997) plus two studies over longer time periods found 86% reliability across 18 months (Crowell et al., 1996) and 70% reliability across four years (Ammaniti, Speranza & Candelori, 1996).

Bakermans-Kranenburg and van IJzendoorn (1993) found AAI categories to be independent of non attachment related memory which is particularly relevant to the dismissing category where lack of memory is considered to be employed as a deliberate attempt to block the narrative. Additionally, the AAI has been found to be unrelated to intelligence, including verbal fluency, (Crowell, Fraley & Shaver, 1999) allaying concerns about the overall coherence of narrative being given too much consideration in overall classification.

For the reader to understand what the distribution of attachment states of mind means when considering specific groups, a guide to the normal distribution of categories is needed. In a meta analysis of the first 10500 AAIs used in research, Bakermans-Kranenburg and van IJzendoorn (2009a) identified the distribution of AAI classification based on a non clinical north American mother sample (N=748) as 58% F, 23% Ds, 19% E when analysing 3 way

organisation and 56% F, 16% D, 9% E and 18% U/CC[3] when analysing 4 way classification. Interestingly, Bakermans-Kranenburg and van IJzendoorn (2009b) found no systematic or method independent gender differences in attachment patterns from childhood through to adult representations.

1.3.1.2 Predictive validity: Attachment across the lifespan

With Bowlby arguing that attachment can be transmitted to the next generation (1973, 1988) and the development of the SSP and AAI, empirical research began to demonstrate the predictive nature of attachment. Indeed, attachment classification has been found to successfully predict infant classification on the SSP from their parents AAI with results ranging from 71% to 77% accuracy for secure versus insecure ratings (Fonagy, Steele & Steele, 1991; Radojevic, 1994; Steele, Steele & Fonagy, 1996) with similar replications across a number of cultures (Hesse, 1999).

In a significant piece of work, van IJzendoorn (1995) conducted a meta analysis of the 14 studies available that measured attachment with the AAI and found a 75% correspondence rate for mother-infant same attachment across secure and insecure categorisation. This work accounted for studies in six countries and found an effect size of d=1.06 with the author calculating 1087 studies with null results would be needed to reduce the results to insignificance. The authors also conducted comparisons for three way analysis (secure, dismissing and preoccupied) and found a 70% correspondence rate (effect size for dismissing d=1.02 and preoccupied d=0.93). This rate was comparable to that found by Benoit and Parker (1994) who investigated attachment transmission across three generations. They found, in 3 way analysis, a 75% correspondence between grandmothers and their adult daughters and an 81% correspondence between the adult daughters and their infants and a correspondence of 77% in 4 way analysis. Similarly Grossman, Fremmer-Bombik, Rudolph and Grossman (1988) found a 77% correspondence rate.

Van IJzendoorn (1995) also reported on nine studies that had 4 way analysis and found a 63% correspondence between mother and infant attachment supporting earlier work by Ainsworth and Eichberg (1991) who found an 80% correspondence rate within four way analysis. These high concordance rates when including unresolved classification are, as

[3] In studies where U and CC classifications are too small for comparative purposes it has become common practice to collapse the two strategies and consider them together as both represent a breakdown in global strategy whether for a limited period or across the whole transcript (Shmueli-Goetz, Target, Fonagy & Datta, 2008

pointed out by Hesse (1999), surprising considering unresolved status in the AAI only requires a few brief although highly disorganised or disorientated sentences and the disorganised infant classification on the SSP only a few seconds of behaviour deemed to be disorganised. Further highlighting the predictive nature of parental attachment are results from Rosenstein and Horowitz (1996) who found an 81% concordance rate (secure vs insecure) between mothers and their adolescent children thus suggesting that transmission of attachment from parents continues throughout developmental life stages.

1.3.1.3 The AAI and clinical populations

The AAI was not designed for clinical populations yet has shown huge power in differentiating clinical and non clinical groups. In a meta analysis to describe attachment distribution in 33 studies, including over 2000 AAIs across cultures and considering mother, father, adolescent and clinical samples van IJzendoorn and Bakermans-Kranenberg (1996) found an overrepresentation of the insecure categories both in 3 way (χ^2 (df=2) = 223.24, p<0.001) and 4 way analysis (χ^2 ,(df =3) =114.83, p<0.001) specifically within the clinical samples. These samples contained a range of psychopathology from borderline personality disorder and other Axis II disorders (DSM III; *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed.); American Psychiatric Association, 1980) to depression, conduct disorder and those who had been psychiatrically hospitalized. The authors did note, however, there was no relation between insecure attachment style and clinical diagnosis. These results were replicated in a later and more extensive meta analysis (Bakermans-Kranenburg & van IJzendoorn, 2009a) involving over 10500 AAIs. Here, 73% of the clinical populations assessed (76 samples, N=1956) had insecure attachment classifications in 3 way analysis (37% Ds and E), with strong over representation of U/CC classification when analysis was extended to 4 way comparison (43% U/CC; (χ^2 (df =3) =1113.47, p<0.01). Moreover, attachment classification also strongly differentiated a clinical sample of 82 non psychotic hospitalised patients and 85 carefully matched control group in a study conducted by Fonagy et al. (1996) in both 3 way (χ^2,(df,=3)=36.9, p<0.001) and 4 way (χ^2,(df,=2) =83.1, p<0.001) analysis.

There are, however, pragmatic and ethical considerations to be made when utilising the AAI within clinical population. Using this tool within disordered populations magnifies the potential challenge for the interviewee, interviewer and rater (Turton, McGauley, Marvin-Avelan & Hughers, 2001). Individuals with psychopathology are more likely to have experienced extreme adversity and possible deprivation which could make following and

coding the narrative very difficult (Turton et al., 2001). This was an obvious consideration when Hesse (1996) developed the 5th classification on the AAI of CC where competing strategies exist and are reflected in a global breakdown in a coherent attachment strategy.

Finally, even thought the AAI has been successfully utilised in populations with extreme mental health difficulties (Dozier, 1990; Fonagy et al, 1996), Main et al. (2002) advise against using the AAI in thought disordered populations as it would be impossible to distinguish if disorganised narrative was the result of pathology or lapses in the monitoring of discourse. This leaves this particular population under researched in terms of understanding their mental health difficulties within the context of their early childhood experiences. Arguably, however, the methodological concerns of implementing the AAI should not outweigh the importance in developing our understanding of how attachment experiences have affected those with thought disorders. Rather than making no effort, sensitive attempts should at least be made to administer the AAI where analysis conducted is mindful of the advice offered by Main et al., (1993).

1.3.1.4 The AAI: continuous vs categorical analysis

Whilst the predominant use of the AAI is categorical analysis, the overall coding classification is made from a large number of continuous subscales that reflect a dimensional representation of attachments, for example 'coherence of transcript' and 'coherence of mind' that are hugely influential in final classification of adult attachment (Main, Goldwyn & Hesse, 2002). However, as Bakermans-Kranenburg and van IJzendoorn (2009a) point out, there is a notable lack of clinical studies using these scales. Shmueli-Goetz, Target, Fonagy and Datta, (2008) postulate that changes in these subscales, if AAIs were to be repeated, may reflect more subtle changes that have not yet affected the overall level of representation. Consequently, the authors suggest that the configuration of these subscales may reflect clinical disorders better than the overall classification system but this has not yet been tested due to a the lack of well validated empirical measures. Only one study, a taxometric investigation has examined the latent structure of individual differences as assessed by the AAI (Roisman, Fraley & Belsky, 2007). The authors argued that categorical analysis can lower predictive validity, reduce the statistical power by measuring continuous scales and then modelling them categorically and imposing a structure where there is none has theoretical implications. Roisman and colleagues (2007) conducted analysis on 504 AAIs and found that the subscales that differentiated the secure and dismissing categories were more applicable to an underlying dimension of secure/ anxious rather than categories. This

was not the case for the preoccupied and unresolved classification, however, highlighting the need for further work to establish validity and reliability across these subscales (Roisman et al, 2007).

1.3.1.5 The AAI and use with adolescent populations

Allen (2008) reviewed the use of the AAI within adolescent populations noting that it was originally designed to measure adult attachment. Concerns regarding the developmental appropriateness of the measure for this group were highlighted by van IJzendoorn and Bakerman-Kranenburg (1996) who hypothesized that adolescents from non clinical populations would be less autonomous and therefore less likely to be placed in the secure category as they have yet to consider their childhood experiences, and certainly not as much as would be expected in adulthood. The authors argued that this would be reflected in higher placement in the dismissing category where lack of recall and poverty in narrative is expected. However, in their meta-analysis (1996) the authors found no significant difference between distribution of AAI classification of adolescents compared to adult distributions. Thus suggesting the AAI measures the same constructs of attachment with adolescent populations as compared to adult samples.

In a follow up meta analysis after their 1996 study, Bakermans-Kranenburg and van IJzendoorn (2009a) completed a further meta-analysis of the 10,500 attachment interviews that had been reported to September 2008. The authors wanted to establish normative data and trends for AAI classification across community and clinical samples. In terms of adolescent samples Bakermans-Kranenburg and van IJzendoorn (2009a) investigated 12 non clinical populations (N=617) (e.g. Beijersbergen, Bakermans-Kranenberg, van IJzendoorn & Juffer, 2008; Dykas, Woodhouse, Cassidy & Waters, 2006; Furmen & Simon, 2004; Larose, Bernier & Tarabulsy, 2005; Scharf, 2001; Scharf, Mayseless & Kivenson-Baron, 2004) and compared standard residuals where a deviation of ±3.26 (converging with $p<0.001$) was considered significant and robustly different from the norm. They found a significant difference between the norm with adolescents demonstrating significantly more dismissing attachment styles (standard residual = 6.48) where 3 way analysis showed 35% were dismissing, 52% secure and 13% E. In addition an under representation was found in both the preoccupied attachment styles (standard residual = -3.72) and the unresolved classifications (standard residual = -3.78). These results were similar to those found by Ammanati, van IJzendoorn, Speranza and Tambelli (2000) who found an over representation

of Ds and an under representation of U in a sample of 10 to 16 year olds using the Italian Attachment of Childhood and Adolescence interview.

Adolescent narratives may be restricted but these results should be considered carefully when the largest study sample included, and therefore carrying more weight in the meta analysis, was the one by Beijersbergen and colleagues (2008) where all participants were age 14 which is not a true reflection of the adolescent developmental period. Importantly, it should be noted that that the dominant category in this analysis of non clinical adolescents is still secure attachment. This reflects the wealth of empirical evidence indicating the AAI is a valid measure of adolescents' attachment representations and that adolescents can flexibly utilize models of self and other during the interview (Allen, 2008; Main, 1991). Indeed, the AAIs of adolescent mothers have been successful in predicting infant attachment (Ward & Carlson 1995).

The under representation of the unresolved category could be due to the age of this group making them less likely to have experienced significant loss compared to their adult counterparts (Bakermans-Kranenburg & van IJzendoorn, 2009a) and therefore less vulnerable to a disorganisation of their narrative. However, as Main et al., (2003) point out multiple losses are no more likely to cause disorganisation than a single loss so a single loss in adolescence could theoretically represent similar U placement to an adult with multiple losses. Perhaps it is the case that adolescents experience lower levels of loss than adults but the number of losses or significance of the relationship is rarely reported in empirical work making it difficult to come to a definitive conclusion.

1.3.1.6 Considerations for the AAI

To collect and accurately code data using the AAI, researchers need to undertake a rigorous, time consuming and expensive training schedule. Attending an AAI institute for two weeks is the initial stage of training followed by an 18 month reliability process where inter rate reliability has to reach 80% across all practice transcripts. An interview can last between 45 to 90 minutes and has to be transcribed verbatim potentially taking 10 hours to complete. Coding can take up to six hours depending on the nature of the transcript. This complex and extremely lengthy process is often a pragmatic reason inhibiting the utilisation of this measure and has led to the development of a number of self report measures.

1.3.2 Self report measures of attachment

Self report measures are often utilised as a pragmatic alternative to observer rated measures and look at a range of attachment constructs. They were initially developed to predict adult attachment from romantic relationships (Hazan & Shaver, 1987) but evolved to examine parental, close and romantic relationships with varying amounts of internal and external validity.

1.3.2.1 Close relationships

The Adult Attachment Scale (AAS: Collins & Read, 1990), the Relationship Questionnaire (RQ: Bartholomew and Horowitz, 1991), the Relationship Style Questionnaire (RSQ: Griffin & Bartholomew, 1994), Experiences in Close Relationship (ECR: Brennan, Clark, Shaver, 1998) and the Attachment Style Questionnaire (ASQ: Feeney, Noller & Hanrahan, 1994) all assess an individual's current self view of relationships. Two of these questionnaires, the RQ and the RSQ provide similar constructs as the AAI with both defining categories of 'secure', 'dismissing', 'preoccupied' and 'fearful'. The RQ has been used to find significant association between adult attachment and depression and anxiety but the internal consistency of the measure is inconsistent and ranges from quite low on the secure category (0.32) to high on the fearful category (0.79). Also the predictive reliability of this tool has been questioned with one study finding as individuals became older, they became less insecure (e.g. dismissing or preoccupied) and more secure (Zhang & Labouvie-Vief, 2004). This is contrary to the relatively stable construct of attachment and internal representation proposed by Bowlby (1972/ 1980) and the finding from longitudinal AAI studies. The RSQ followed a similar path to the RQ where the secure category had an internal reliability of 0.32 and preoccupied was 0.46 although dismissing and fearful had higher cronbach alpha scores (0.64 and 0.79 respectively). It should be noted, however, that the RSQ was predominantly designed to measure attachment *dimensions* rather than categories, and in this respect, cronbach alphas were much higher; for the dimension of avoidance was 0.86 and for anxiety it was 0.84. Interestingly, in comparison to the AAI, the RSQ predicted psychopathology where both high and low stressful conditions were measured, whereas the AAI only predicted pathology under conditions of high stress (Fortuna & Roisman 2008).

The remaining self report measures appear to deviate away from traditional categorisation and focus of avoidance (view of others) and anxiety (view of self) dimensions (AAS, ASQ and ECR). Whilst these measures demonstrate relatively high levels of internal consistency (ranging from α=0.86 – 0.9 for avoidance and 0.59 – 0.9 for anxiety), arguably they are no

longer measuring the comparable construct to attachment as proposed by Bowlby. Perhaps self report measures should be considered as important in measuring the dimensions of attachment thus adding to the current knowledge and understanding of attachment, rather than being a pragmatic, and possibly inferior, alternative to the AAI.

1.3.2.2 Early experiences with parents

The Parental Bonding Instrument (PBI: Parker, Tupling & Brown, 1979) also focuses on current awareness but specifically in relation to recollections of parental behaviours and attitudes towards them in childhood. Whilst this appears to measure similar attachment representations as the AAI it deviates on two key points. Firstly, it only yields two factors, care and overprotection, which are theoretically very different to the categories on the AAI. Secondly, the PBI accepts the current representation of the individual completing the measure. In comparison, the AAI assesses the coherence of discourse around representation rather than the representation per se. Discrepancies in information reported have come to light in a study by Manassis, Owens, Adam, Wesy & Sheldon-Kellor (1999) who compared the attachment experiences reported on the AAI and PBI. They found significant differences in the reports of the PBI for those with insecure/ preoccupied attachment styles and advised caution of the use of the PBI in clinical samples.

1.3.2.3 Difficulties with self report measures

The lack of internal consistency and deviation from categorical representation in self report measures is of methodological concern when purporting to measure the construct of attachment. Perhaps these difficulties can be accounted for by the reporting bias associated with self report measures. These measures are dependent on accurate reporting of current awareness and conscious processing (Ravitz et al, 2010), but individuals with dismissing attachment styles where avoidance is a key characterisation are likely to utilise deactivating strategies to minimise distress and so over regulate their emotions. This group is therefore less likely to acknowledge difficulties and therefore more likely to report themselves as having a secure attachment style or are classified as secure from their answers (Scott Brown & Wright, 2001). In addition, defensive reporting of lower levels of anxiety than the level actually being experienced or a lack of insight into difficulties can also lend themselves to inaccurate reporting (Crowell, Fraley & Shaver, 1999).

1.3.2.4 Self report measures of attachment for adolescent populations

The lack of described self report attachment measures specifically developed for adolescents is notable. The majority of measures were primarily developed for adults (Lerner & Steinberg, 2009) which is problematic when applied to adolescent populations. For example, Griffin and Bartholomew (1994a) noted low internal consistency on the RSQ when used in adolescent samples perhaps because the measure asks about close relationships which an adolescent may not yet have experienced[4].

Adolescent specific questionnaires have been developed but do not attempt to measure similar categories to the AAI and unfortunately have also not generated as much empirical evidence as the AAI (Crowell, Fraley & Shaver, 1999). One such measure is the Adolescent Attachment Questionnaire (AAQ: West, Rose, Spreng, Sheldon-Keller & Adam, 1998). It is a self report questionnaire validated across normative and clinical adolescent populations with the latter group also completing the AAI for comparative purposes. Cronbach alpha's for the three subscales of angry distress, availability and goal corrected partnership demonstrated good internal consistency (0.62 to 0.80) and the authors found significant associations across their clinical sample between the AAI and the AAQ classifications. Secure attachment was associated with higher reported availability of caregivers ($t(66)=2.21$, $p=0.031$), dismissing style was associated with less partnership with attachment figures ($t(66)=-2.65$, $p=0.010$) and preoccupied attachment styles were associated with more angry distress aimed at attachment figures ($t(66)=-2.61$, $p=0.011$). However, the AAQ measures attachment constructs in vastly different ways to the AAI. A series of approximately 45 statements are scored on a 5 point likert scale (devised from the Reciprocal Attachment Questionnaire for adults, see West & Sheldon-Keller, 1992) that relate to the three subscales above. The authors note their questionnaire draws on conscious rather than subconscious attachment process thus leaving answers open to reporting biases discussed in the previous section. They also comment that whilst the found convergence between their constructs of availability, goal corrected partnership and angry distress and those on the AAI, the results cannot be considered an index of secure or insecure attachment relationships. Returning to a point made by Scott Brown and Wright (2003), comparing self report to observer rated attachment interviews evidently remains hazardous where careful comparison of the constructs being measured must be made.

[4] Griffin and Bartholomew (1994a) also noted that low consistency was evident in adult samples suggesting an inherent difficulty with the measure rather than the population. In such cases, multiple measures would provide confidence to any results found.

The Inventory of Parent and Peer Attachment (IPPA: Armsden & Greenberg, 1987) is another self report measure but has been more widely used and aims to assess the internal working model of the adolescent concerning their peer and parent attachment relationships. The authors make no attempt to replicate the classifications of Ainsworth et al, (1978) or Main and Goldwyn (1995) and instead focused on the adolescent's cognitive and affective experience of these relationships. It assesses the adolescent's ratings of accessibility and responsiveness of parents and peers and any anger or hopelessness experienced as a result of inconsistent or unresponsive reactions. Three scales are scored; degree of mutual trust, quality of communication and degree of anger and alienation and are commonly collated to provide secure versus insecure dimensions (cronbach alpha scores are high at approximately 0.9). It has been used with both clinical and non clinical adolescent populations but, not often in comparison to the use of the AAI and other adult self report measures with adolescence.

1.3.3 Considerations when selecting attachment measures

When taking into consideration what attachment measure to use, Hesse (1996) has argued the dangers of fitting individuals into categories of attachment compared to looking along a continuum where greater individual variability may be found. For example, he proposes more intense scores could possibly differentiate within group differences that might otherwise be lost in group classification (Shmuei-Goetz et al, 2008). Bartholomew and Horowitz (1991) argued the case for and produced a measure to assess a continuum of attachment (Inventory of Interpersonal Difficulties: IIP64/32: Horowitz, Rosenberg, Baer, Ureno, & Villasenor 1988). They found individuals to show elements of at least two and in some cases all four attachment styles (not including the CC category) even though individuals were placed into the primary category of attachment for comparative purposes in their study. However, Bartholomew and Horowitz (1991) also conducted a correlational analysis to look at their results comparing continuous ratings of attachment using models of self and other (see section 2.2.1) with group classification and found no difference thus reconciling both categorical and dimensional models (Ravitz et al. 2010).

Discrepancies in attachment literature may well exist due to the large number of measures available that differ both in their methodologies and, most significantly, vary in the type of constructs of attachment they measure (Bartholomew & Shaver, 1998; Fortuna & Roisman, 2008; Ravitz et al. 2010). Careful consideration must therefore be taken when choosing attachment measures in terms of the type of relationship being investigated, the construct of

attachment that needs to be measured and the time considerations for scoring or coding the assessment tool (Ravitz et al, 2010). Measuring attachment in adolescence appears to be synonymous with measuring adult attachment where measures have been validated across both groups. Ideally the AAI would be the first choice for time and budget unlimited clinical research but pragmatic considerations often result in the utilisation of self report measures.

1.4 Attachment and the mechanism of vulnerability to psychopathology

Whilst causality has not been established, attachment as a vulnerability to or a risk factor towards developing a mental health difficulty must be deliberated (Cummings & Cicchetti, 1990; Cicchetti et al., 1990). It has been hypothesised that the minimising or over exaggeration of distress that exists within insecure attachment styles interferes with the flexible psychological adaptation to stressful or distressing life events usually seen in those with secure attachment. Therefore, we need to consider how the potential interpersonal and affect regulation difficulties of insecure attachment styles can impact on and activate the attachment system and what psychological mechanisms underlie the possible relationship between attachment and psychopathology.

1.4.1 Attachment and emotion regulation

The work of Bowlby (1969/1982, 1973, 1980) and his seminal attachment theory was, in fact, developed from observations of individual's attempts to regulate their emotions within the context of infant caregiver relationships thus making emotions integral to attachment theory. It is now one of the most influential frameworks from which to conceptualise emotion regulation (Shaver & Mikulincer, 2007). Individuals are born without the ability to recognise or regulate their emotions and it is within early infant caregiver interactions that these regulatory capacities are scaffolded, learned and where emotional representations of physiological states develop. In an ideal situation, when an infant becomes aroused the caregiver can sensitively respond to their emotions and reflect back to that infant an accurate representation of the emotion. In this way the infant can organize this experience into their self representation (e.g. they can label and understand their emotional experiences). These early emotion regulation experiences with the caregiver combine to form the representational systems of self (i.e. the internal working models) and, in turn, are associated with specific attachment styles that are postulated to regulate negative arousal when an individual experiences distress (Zimmermann, 1999).

1.4.1.1 Secure attachment and emotion regulation

Individuals with a secure attachment style have a positive view of both themselves and others in being able to regulate their emotions, this having developed from sensitive interactions with the caregiver where their arousal was contained and their emotions labelled. Fonagy et al. (2004) propose that this sustains organisation of the self in relatively stressful situations. The individual's past history has enabled them to learn that they are able to modulate their own distress and that seeking support from others enhances their ability to problem solve the situation and reduce any undesirable emotions. They are more likely to have a wider range of coping strategies for negative affect and have the ability to change this strategy dependent on the situation (Zimmermann, 1999). Interestingly, as Shaver and Mikulincer, (2007) highlight, because secure individuals have learned emotions are manageable, they do not need to alter or suppress emotional states. This allows them to bypass more dysfunctional aspects of emotion regulation so the secure individual can remain open to all emotional states and integrate them into thoughts, feelings and behaviours (Lazurus, 1991). Indeed, Zimmermann (1999) found in a sample of 43 adolescents from a longitudinal birth cohort study, that secure attachment was significantly correlated to adaptive emotion regulation ($r=0.50$, $p\leq0.001$) which was measured as flexibility in attribution, flexibility of behaviour and access to personal feelings. When the authors coded the AAI, they found that adaptive emotion regulation was significantly related to six specific areas; support by parents, proximity seeking, coherency, childhood memory, valuing of attachment and integration of attachment experiences. This reflects just some of the range of emotion regulation capacities that can be developed within the context of early attachment experiences.

1.4.1.2 Insecure attachment and emotion regulation

Insecure attachment styles are over represented in clinical samples (Bakermans-Kranenburg & van IJzendoorn, 2009a) so it is of particular importance to understand the development of emotion regulation strategies within these styles in an effort to explain this over representation. In addition, comparing the development and utilisation of emotion regulation strategies of secure and insecure attachment individuals may help us understand why some individuals go on to develop psychopathology within adolescence.

If mirroring by the caregiver in early interactions is not sensitive, either being incongruent such as laughing when the infant is crying, or being too similar and representing contamination to the infant (e.g. 'I cry, they cry'), regulatory development is compromised.

Consequently, the infant may inaccurately label their emotional states, not understand their true emotions or be unable to label emotions at all.

An internal working model of a positive view of self but negative of others in terms of regulating distress is associated with anxious/ avoidant infants and those with dismissing attachment styles. It is postulated that these individuals have experienced their caregiver as unable to contain or respond sensitively to their distress through rejection, incongruent mirroring or causing over arousal by intrusive parenting. To counteract their frustration with the caregiver the infant will have developed a strategy of over regulating emotions to deactivate their attachment system and therefore suppress or avoid these undesirable emotions. By doing so, they learn to minimise the impact of distress and subsequently demonstrate premature independence and self regulation in infancy. This avoids having to rely on the availability of the caregiver for regulation. In fact, this stressing of independence can be seen in adulthood where individuals with a dismissing attachment style often dismiss the intimacy needs of others or show derogation towards those who value support (Bowlby, 1988).

In an effort to deactivate their attachment system, individuals with a dismissing attachment style are more likely to utilise emotion regulation at the earliest stage by strategically removing themselves from the situation that is eliciting the unwanted emotion. If this is not possible they adopt a strategy of 'defensive exclusion' (Bowlby, 1980) where when their attachment system is activated, they attempt to block or suppress any distressing emotions that may enter their thoughts, feelings or behaviours (Shaver & Mikulincer, 2007). By attempting to block out the majority of emotional states, Shaver and Mikulincer (2007) argue that individuals with a dismissing attachment style therefore do not to see or experience the functional and adaptive aspects of emotion regulation.

These strategic behaviours are also likely to be more rigid (Zimmermann, 1999) and represent an unhelpful cycle whereby, through usually avoiding distress, insecure/ dismissing individuals become more sensitive to distress and start blocking emotions earlier and earlier. As a consequence, these individuals are less likely to be able to understand their own feelings and emotions or the emotions displayed by others and subsequently will find social interactions more challenging than those with a secure attachment. Reflecting these difficulties in emotional understanding, Zimmermann (1999) found a negative correlation between flexible behaviour, attribution and access to personal feelings and dismissing attachment styles. Furthermore, a negative association was found between this attachment

style and adaptive emotion regulation ($r=-0.53$, $p\leq0.001$). The lack of access to emotional states is reflected in the AAIs of individuals with a dismissing attachment style where there is a paucity of references and understanding with regard to the emotional states of themselves and others.

An anxious/ resistant infant or preoccupied adult counterpart has an internal working model where they have a negative belief about themselves being able to regulate their emotions but have confidence in others. This has developed from receiving inconsistent responses from their caregivers when displaying emotional affect. In response, the infant hyper-activates their attachment system in efforts to gain a consistent response from their caregiver and results in an under regulation of emotion. This situation is sustained by the individual being hyper-vigilant to threat stimuli or the internal physiological sensations of negative emotions thus responding to them at a much lower threshold. Therefore, in the opposite manner to those with a dismissing attachment style, these individuals are more likely to attend to the emotions they are feeling and actually exaggerate their expression of them in efforts to gain a consistent response from important individuals in their social networks. As their experience from caregivers has been one of inconsistency, Cassidy and Berlin (1994) suggest that by emphasising their helplessness, these individuals can elicit the care and attention of others. Here, emotion regulation efforts are centred on the amplification of emotional states to ensure the attention of others and have also been associated with inflexibility in behaviour (Zimmerman, 1999). As a consequence of this, these individuals are more likely to appraise their emotions too quickly making erroneous conclusions.

Both types of insecure attachment styles represent maladaptive emotion regulation strategies, with both, arguably, leading to emotion dysregulation. Indeed, insecure attachment has been associated with more rigid and negative appraisals, inappropriate levels of emotional arousal and the likelihood to misinterpret social situations and the emotions in others (Zimmermann, 1999). Whilst the preoccupied individual predominantly focuses on the intensifying the emotions and emotional expression, the dismissing individual tries to avoid getting to this stage at all by avoidance, suppression or minimisation of perceived threat or negative emotions. Similarly, however, they are both less likely to generate functional emotion regulation strategies. For example, Benoit, Bouthillier, Moss, Rousseau and Brunet (2010) found that Post Traumatic Symptom Disorder (PTSD) symptomatology was worse in those with insecure attachment and that emotion regulation, specifically a lack of emotion focused coping which was correlated to worse PTSD symptomatology, mediated this relationship. Shaver and Mikulincer (2007) have also found a lack emotion focused coping to be

associated with insecure attachment. Poor emotion regulation strategies have been associated with conduct problems in children and adolescents, particularly with regards to 'reactive' aggression that is hypothesised to be a defensive response to perceived threat (Mullin & Hinshaw, 2007). Highly negative reactions were associated with poor emotion regulation whereby individuals misinterpreted social emotional cues and misunderstood social information thus making interpersonal interactions more challenging.

1.4.1.3 Disorganised/ unresolved attachment and emotion regulation

Where a caregiver has been profoundly frightening, frightened or abusive, accurate and sensitive mirroring is unlikely to have occurred within the attachment dyad and it is likely that the caregiver will often be neither responsive nor available offering non-congruent and or non-contingent responses to the emotional displays of the infant. This has a disorganizing effect on the infant because they cannot regulate their negative affect within the attachment relationship yet at the same time want to simultaneously approach and flee from their attachment figure (Cassidy, 1994; Main & Hesse, 1990). This results in a breakdown in emotion regulation strategies and where an infant is classified as disorganised. Here, because the caregiver will not have modified their behaviour to attend to the infants need, the infant does not learn that they can be self regulating agents and lack emotion regulation strategies (DeOliveira, Bailey, Moran & Pederson, 2004) which can continue on into adulthood. This leaves an individual with an internal working model where they have a negative belief about their own ability of both themselves and others being able to help them organise, label and interpret their emotions.

Empirical work has demonstrated associations have been made between disorganised/ unresolved attachment and poor social and emotional developmental outcomes (Carlson, 1998; Lyons-Ruth & Jacobvitz, 1999), psychopathology (Bakermans-Kranenburg & van IJzendoorn, 2009a; Fonagy et al., 1996; Hammens et al., 1995) and disturbed interpersonal relationships in childhood and adolescence (Lyons-Ruth & Jacobvitz, 1999). Physiological findings where disorganised infants (in the SSP) show extended arousal after exposure to stress also suggest they cannot regulate their emotions at times of acute stress and in the period immediately after (Spangler & Grossman, 1999). In a sample of women with childhood histories of abuse and current psychiatric disorder, insecure attachment has been associated with lower emotion regulation capabilities (Cloitre, Stovall-McClough, Zorbas & Charuvastra, 2008). Highlighting the importance of emotion regulation in functional outcome, these authors found that it mediated the relationship between attachment and functional impairment ($ß=0.09$, $z=1.76$, $p<0.05$). Alink, Cicchetti, Kim and Rogosch (2009)

found insecure relatedness (a measure of perceived emotional quality of relationships where individuals report low quality, low amounts of proximity seeking and confused behavioural patterns) and maltreatment were mediated by emotion regulation. The authors demonstrated that maltreatment in children was associated with lower levels of emotion regulation that in turn predicted higher levels of externalizing problems (e.g. getting into many fights, cruelty or bullying (ß=-0.31, SE=0.06, $p<0.05$)) and internalizing problems (e.g. feeling worthless, overly anxious to please (ß=-0.21, SE=0.04, $p<0.05$)).

The pervasive nature of emotion dysregulation is highlighted by Cloitre et al. (2008) who highlight it continuing on in adults who have experienced abuse as children. This, in fact, is an area that needs more discussion. The ongoing effects of attachment relationships where caregiving has been profoundly abusive, frightening or absent will undoubtedly affect an individual's internal working model of self and other and thus have an effect on their ability to regulate their emotions.

1.4.1.4 Conclusions regarding attachment and emotion regulation

These studies highlight the developmental risk of psychopathology for those individuals who have developed emotion dysregulation in context of insecure attachment experiences and/or abusive relationships. Each attachment style (e.g. secure, dismissing, preoccupied and unresolved) has their own unique cognitive, behavioural and emotional mechanisms that guide an individual's emotion regulation strategies and can be both adaptive and maladaptive to the individuals own needs. These strategies can change, block or repress the generation or expression of emotions and shape the appraisals and subsequent feelings and behaviours of that individual. Attachment styles can also alter the intensity of emotions where they can be amplified, maintained or diminished dependent on the internal working model that the individual carries with them though life. It is proposed, therefore, in this thesis that emotion regulation mediates the relationship between attachment and psychopathology and it is this mechanism that explains the variance in the outcome of individuals with mental ill health rather than attachment *per se*.

A critical review was carried out to explore the current evidence base regarding emotion regulation and psychopathology within clinical adolescent samples in an effort to understand what connections have already been made in the absence of a developmental framework. This is reported in part III and presents some of the theoretical, methodological and pragmatic challenges of investigating emotion regulation in adolescent populations with mental health difficulties. What was evident, however, was the lack of studies investigating

emotion regulation within the context of attachment which is surprising considering the evidence presented thus far where emotion regulation is proposed to be integral within attachment experiences.

1.4.2 Attachment and interpersonal relationships

To recap, Bowlby (1969/1982, 1973, 1980) proposed that experiences with primary caregivers form internal representations about the self and others that provide a template for and guide all future interpersonal interactions. In childhood there are separate models for each caregiver yet by adolescence, these models have consolidated into an overarching attachment organisation referred to as an attachment state of mind. Internal working models for parents remain in existence but the attachment state of mind produces a generalised internal working model that influences an individual's perception of both the people they meet and their experiences of the world, essentially how they process attachment relevant social information (Dykas & Cassidy, 2007). This helps an individual form, a sense of self efficacy within their interpersonal relationships (Sarason, Pierce & Sarason, 1990). The ability of an individual to regulate their distress through internal working models has led to inevitable investigation on how this impacts on their perceived levels of social support. Previous findings have observed that working models of self and other mediate interpersonal experiences and will subsequently impact on the construct of social support (Hazan & Shaver, 1987; Kobak & Sceery, 1988; Main, Kaplan & Cassidy, 1985) in terms of how an individual mobilizes and cultivates mutually supportive relationships with others (Collins & Feeney, 2000; 2004). As Priel and Shamai (1995) note, the evidence suggests that the perception of available social support consistently and significantly contributes to an individual's ability to self regulate their distress.

A secure attachment style, represented by a positive model of self and other, allows an individual to flexibly adapt to their situation both in terms of interpersonal interaction and environment. At times of stress and distress they are confident of their ability to cope in the situation and are able to express their needs and utilise support around them. As they expect others to be available for them (Kobak & Sceery, 1988) they are more likely to engage in behaviours facilitating satisfying social interactions thus perpetuating a positive internal working model of self and others. This flexibility works as resilience in the face of stressful life situations and has been associated with more successful transitions such as moving to college (Kobak & Sceery, 1988). These expectations of self and other form in the early years of childhood and have consequences for later years. Children classified as secure on SSP

have been repeatedly rated as more competent socially, demonstrating more warmth and affective sharing with peers, than those with anxious attachment in infancy (Waters, Wippman & Sroufe, 1979). A similar rating pattern has also been repeatedly found in teachers rating the sociability of their young pupils (Sroufe et al., 2005). It is argued therefore, that those with secure attachment are not only able to show more positive emotional states but they are also more likely to manage negative emotions within the company of others and still maintain a constructive relationship with them (Kobak & Sceery, 1988). Further to this, secure attachment in the SSP has been shown to predict better social functioning in preschool (see review Thompson & Lamb, 1986) and good peer relationships in childhood (Grossman & Grossman, 1991; Skolnik, 1986).

A secure attachment style has also been hypothesised to serve as a protective factor when considering social support. Sarason, Pierce, Shearin & Poppe (1991) found that positive beliefs in self and others were associated with positive perceived and actual levels of social support. Furthermore, a positive view of both self and other significantly predicted lower levels of psychopathology ($\beta=0.44$, $p<0.001$ and $\beta=0.13$, $p<0.001$ respectively) in young adults with and without a history of physical maltreatment (McLewin & Muller, 2006). Moreover, Levendosky, Huth-Bocks and Semel (2002) found that a secure attachment style significantly mediated the relationship between a history of child abuse and satisfaction with peer relationships explaining 14% of the variance. This may be indicative of the ability of these individuals to integrate life experiences, good or bad, and still reach out and utilise social support in a helpful way compared to the two insecure groups.

Empirical evidence has further shown that in comparison to insecure adolescents, those who are secure are more likely to rate their parents as understanding their emotional needs (Cassidy, Ziv, Mehta & Feeny, 2003) and have a positive perception of them (Allen et al. 2003). They are more likely to have positive expectations of peers and are flexible in their expectations of others in hypothetical situations of peer rejection (Zimmerman, 1999). In addition, secure internal working models have certainly been associated with help seeking by individuals when distressed (McLewin & Muller 2006). It would be expected that individuals with a secure attachment are likely to report satisfaction with their social support networks. This does not mean, however, that networks are large or there will not be conflict in relationships. Rather, individuals with a secure attachment state of mind are more likely to acknowledge sources of dissatisfaction because these difficulties are not considered insurmountable.

1.4.2.1 Insecure attachment and interpersonal relationships

There is comprehensive evidence demonstrating that different attachment styles are linked to systematic differences in the perceptions and use of social support (Collins & Feeny, 2004). Both insecure attachment styles have been associated with negative bias in interpreting ambiguous social stimuli thus making an individual more vulnerable to negative interpersonal interactions (Cassidy, Kirsch, Scolton & Parke, 1996). Moreover, whereas individuals with a secure attachment are confident of and satisfied with the availability of support, those with an insecure attachment are less satisfied with the support they receive and report less availability of support (Anders & Tucker, 2000; Bartholomew, Cobb & Poole, 1997; Florian, Mikulincer & Bucholtz, 1995; Kobak & Sceery, 1988; Priel & Shamai, 1995; Wallace & Vauw, 1993). These attachment styles are therefore more likely to cause difficulties in interpersonal relationships (Manassis et al., 1994) where they are easily disrupted (Carlson & Sroufe, 1995). Furthermore, in work investigating attachment in context of psychological, biological and environmental factors, Cummings and Cicchetti (1990) postulated that individuals with an insecure attachment style are more likely to hold negative views of themselves as 'not lovable' due to the inconsistent or rejecting behaviours of their primary caregiver. This makes it more likely that they will not experience others as particularly loving or caring and impacts on their ability to experience fulfilling interpersonal relationships.

Highlighting the impact of early attachment experiences on social functioning from a young age, Sroufe, Fox & Pancake (1983) reported results highlighting the predictive validity of early attachment classifications on social functioning in preschool children from the Minnesota study, a longitudinal study of risk and adaptation following individuals born into poverty from birth to adulthood (for a comprehensive review see Sroufe, Egeland, Carlson & Collins, 2005). They found those children who were deemed resistant in the Strange Situation at age 12 or 18 months demonstrated difficulties in social interactions at school, and those found to be avoidant showed hostility or distance towards their peers. Interestingly teacher initiated contact was found to be higher towards the resistant group compared to the avoidant group where teachers reported the avoidant children as the most independent and perhaps erroneously deemed it not necessary to encourage their involvement with the class or activity. The lack of social support initiation by those with an avoidant attachment was replicated in a study by Grossman and Grossman (1991) who found avoidant children at ages 5 and 10 years were less likely to seek help in comparison to secure children who were more likely to seek help and comfort.

These results have also been replicated in adult samples. In fact, Gulliver, Griffiths and Christensen (2010) found that self reliance was the most common barrier to help seeking in adults and Mikulincer and Florian (1995) found those with an avoidant attachment style seek help less than either preoccupied or secure individuals. The maximisation of autonomy that occurs within individuals with dismissing attachment states of mind is particularly vulnerable to this form of self versus other reliance. It could be expected, therefore, that this group would not prioritise help seeking from social support networks or utilise available supports as much as those deemed to be secure or preoccupied in attachment states of mind. Indeed, this ties in with the under reporting of symptoms that is seen within this particular attachment style. Arguably, if they do not understand or avoid their emotional distress, this group would of course be less likely to seek help as they may not believe they need it. Considering the critical importance of intervening as early as possible in psychiatric disorders, Boydell, Gladstone and Volpe (2006) investigated help seeking delays in first episode psychosis and found that individuals with an avoidant strategy of ignoring or hiding symptoms did indeed delay help seeking attempts. In addition, Collins and Feeney (2000) found that when help seeking was actually made, the attempts by those with insecure/ dismissing attachment strategies were ineffective and limited (e.g. complaining about a problem without making it clear help is wanted), thus reinforcing the individual's negative expectations of others.

The reasoning behind this behaviour in someone with an insecure/ dismissing attachment are twofold. Firstly, an insecure/ dismissing attachment state of mind reflects a positive bias towards the self and a negative bias towards others. Essentially, through consistent perceived rejection by caregivers, these individuals have learnt to rely on themselves at times of need and distress because others cannot meet their needs. Bowlby (1973) termed this 'compulsive self reliance' that, in turn, is likely to lead to smaller networks where relationships are experienced as less rewarding and comforting (Kobak & Sceery, 1988). Secondly, these individuals are also more likely to avoid emotionally difficult experiences and over regulate their emotions by filtering out distressing information, or information that may activate their attachment system, from conscious awareness. The adaptive nature of this mechanism has been highlighted in a recent study by Sontag and Graber (2010) who examined the coping methods of 295 adolescents (mean age 12.39, sd±0.99) who were experiencing perceived peer stress. The authors found that denial and avoidance, essentially disengagement coping strategies, mediated the relationship between stress with peers and anxiety and depression symptomatology in young adolescents.

However, as a consequence of this compulsive self reliance, individuals with an insecure/ dismissing style may screen out socially relevant information and thus misinterpret social situations where their subsequent emotional or practical responses are viewed by others as inappropriate or insensitive. Indeed, dismissing individuals have been found to not report or recognise difficulties with social competence even when rated by the peers as more hostile (Kobak & Sceery, 1988). Arguably, this is another function of suppression where the individual employs defensive avoidance in response to perceived conflict or interpersonal difficulties within relationships and are therefore less likely to report problems in such relationships (Dozier & Lee, 1995).

In contrast to the insecure/ dismissing attachment style, individuals with an insecure/ preoccupied attachment style have a negative belief about their own self efficacy and ability to manage emotional states but do have a positive view of others and that they are able to help them. In terms of social support this would appear to be a straightforward relationship where an individual with a preoccupied style would utilise a social support network and manage relationships effectively. However, due to the inconsistent response of their caregiver in early attachment experiences, these individuals are likely to under regulate their emotions and show hyper expression within interpersonal relationships in an effort to secure the desired response, striving for self acceptance that is only gained through acceptance from valued others (McLewin & Muller, 2006). This also means that individuals with a preoccupied attachment will also be hypersensitive to perceived threat or rejection. These two combined factors often lead to lower ratings from this group for perceived social support received. The individuals in their social network would be expected to show more reciprocity and support than those in the dismissing or secure group's networks as the preoccupied individual is so reliant on others to deactivate their over aroused attachment system and regulate their emotions for them. Indeed, research has found that a negative view of self is associated with higher levels of psychopathology (McLewin & Muller, 2006; Muller & Lemieux, 2000; Roche, Runtz & Hunter, 1999) and this relationship is strengthened by a lack of social support (Muller & Lemieux, 2000) plus preoccupied individuals are more likely to rate themselves as less socially competent (Kobak & Sceery, 1988). As a consequence, satisfaction with the level of support may also differentiate this group. Whilst secure and dismissing individuals are likely to report that they receive adequate levels of support, those with a preoccupied attachment are likely to report discrepancies where they do not perceive as much support as they desire due to their heightened threshold of emotional expression.

It is important to investigate clinical samples within the context of social support and attachment as there is growing evidence that the development of psychopathology can disrupt social behaviours and thus make it more difficult for the adolescent to develop and maintain satisfying relationships (Sheeber et al, 1997). A lack of support at times of distress places an individual at further risk of deterioration (Dozier & Lee 1995) and as Lamb (1982) pointed out, the lack of social support networks is a major predictor of hospitalization for individuals with major psychopathological disorders. In light of these findings, further examination is needed to investigate how the mechanism of social support, within an attachment framework, can affect adaptation and outcome within adolescents experiencing mental health difficulties and this is one of the aims of this thesis.

Whilst this particular area of discussion has centred on the interpersonal relationships within the context of attachment relationships, there is additional evidence of social support mediating distress and adaptation in both adolescence and adulthood that is outside an attachment context but still within a developmental one. This demands a separate discussion and part IV of this section will delineate the construct of social support further.

Of empirical note, the majority of attachment and social support studies to date have been placed in stable, middle class families who are described as well adjusted. Those individuals who have not experienced this stability because of negative life events or who are deemed at risk because of difficult attachment related experiences or life situations may well provide further insight into the development of non-optimal social support networks and the development of psychopathology. This study has, therefore, deliberately focused on such individuals, using a group of adolescents with severe and enduring mental health difficulties in an attempt to understand the complex relationship between attachment, social support, outcome and adaptation.

1.4.2.2 Conclusions regarding attachment and interpersonal relationships

From this section it can be formulated that those with a secure attachment style are likely to successfully navigate social relationships where their expectations of themselves and others are positive, realistic and flexible serving as a protective mechanism in response to emotional distress. Conversely, individuals with an insecure attachment style are likely to experience social relationships in a different way. Those with an insecure/ dismissing attachment style are hypothesised to be less likely to seek out support, have smaller social networks and be more likely to misinterpret socially relevant information, yet are likely to

report these relationships as satisfactory. An insecure/ preoccupied attachment style lends an individual to be hypersensitive to threat within relationships, report them as less satisfying and rate themselves as less socially competent. These factors associated with insecure attachment styles have been associated with increasing an individuals vulnerability to developing psychopathology when experiencing distress.

1.4.3 Attachment influence on expression of and reporting psychiatric symptomatology

Arguably, an individual reporting on the psychiatric symptoms they are currently experiencing, whether through a self report measure or interview, is an event likely to activate their attachment system (Scott Brown & Wright, 2003). There is a body of evidence that has been discussed supporting a self representation bias of individuals with insecure attachment styles. However, an understanding of the overarching consequences is needed in terms of what this means for our understanding of the association between attachment and reporting psychopathology

As has been discussed, those with an insecure/ dismissing attachment style will over regulate their emotions, in terms of those felt and those expressed, in an effort to deactivate their attachment system resulting in a likely under reporting of symptomatology. Indeed, the reporting of symptoms and interpersonal distress within this group have been found to be indistinguishable from those with a secure attachment styles (Dozier & Lee, 1995). Conversely, preoccupied individuals utilise hyper activating strategies, where emotions are under regulated, resulting in that individual being more likely report, express or even exaggerate their distress (Main & Goldwyn, 1996). By attending more intently to internal signals, this group often reports higher levels of symptomatology and interpersonal difficulties (Dozier, 1990). Reflecting the positions adopted by individuals in response to the AAI, Beijersbergen, Bakermans-Kranenberg, van IJzendoorn and Juffer, (2008) recruited 152 adolescents (mean age 14 years) from an existing longitudinal Dutch study following individuals from infancy to adolescent (see Jaffari-Bimmel, Juffer, van IJzendoorn, Bakermans-Kranenburg & Mooijaart, 2006). Beijersbergen and colleagues (2008) found those with a dismissing attachment style measured lower stress responses than adolescents with either secure or preoccupied attachment styles (Mean difference = -22.60, SE = 8.91, df =140, $p<0.05$). In comparison, when being asked to consider times of separation, the preoccupied group scored higher than both the dismissing and secure group ($t (201) = 2.27$, $p<0.05$), these results demonstrating the different effect each regulation system causes.

Self and other report differences between attachment styles have been found in adult psychiatric samples. In their study specifically focusing on self and other report of psychiatric symptomatology in a sample of 76 adults with serious psychopathological disorders (predominantly undifferentiated schizophrenia and bi polar disorder), Dozier and Lee (1995) found those with hyperactivating strategies reported more symptomatology than those with deactivating strategies. However, and perhaps surprisingly, clinicians actually rated those with deactivating strategies as more symptomatic, in terms of hearing voices, suspicion and delusions. Unfortunately the authors did not comment on the concordance between clinical rated symptoms and those rated by individuals with hyperactivating strategies, as it would be of interest to see if symptom reporting is, as hypothesised earlier, an over exaggeration of symptoms and distress or whether it is an accurate reflection.

There is evidence of higher reports of internalizing symptoms in adolescents with insecure attachment styles although these findings have rarely been accompanied by an independent report on symptoms (Scott Brown & Wright, 2003). However, where comparisons have been made, discrepancies arise in the dismissing category where adolescents have been found to under report difficulties in sociability compared to reports by friends (Bartholomew & Horowitz, 1991) and similarly under report the hostility they have shown towards others in comparison to the ratings by their friends (Kobak & Sceery, 1988).

From this work it appears important to consider the role insecure attachment plays in the recognition and treatment of psychopathology. Individuals with a dismissing attachment style over value their independence and autonomy thus presenting invulnerability to others. This is often reinforced when these individuals reject help and disclose less about themselves than others (Dozier, 1990) and are therefore harder to engage (Scott Brown & Wright, 2001). As Dozier and Lee (1995) point out, this may lead clinicians and those in the individual's social network to prematurely give up their attempts to help. The authors also postulate that clinicians with heavy caseloads may also too readily accept a dismissing individual's representation of their difficulties. On the other hand, those with a preoccupied attachments style may present in crisis mode more often and have their own difficulties with engagement with the service. As can be the case in their social relationships, these individuals may not feel satisfied with the responses from the health professionals and experience heightened levels of distress as a result. For either insecure style, however, as a result of their internal working models of self and other, how they regulate and report distress and their interpersonal difficulties, there will be suboptimal representation or accuracy of their

symptomatology to mental health services that should also be borne in mind for research investigations.

1.4.4 Unresolved attachment as a risk factor in developing psychopathology

Particular emphasis in research has been on the unresolved classification which appears highly predictive of clinical samples. For example, Fonagy et al. (1996) found 76% of their inpatient sample to be unresolved in comparison to 7% of controls, Manassis, Bradley, Goldberg, Hood and Swinson (1994) found 78% of mothers diagnosed with anxiety disorders to be unresolved and Ward et al., (2001) found 50% of their female anorexic sample had experienced trauma. Within infancy, a disorganised classification is considered a risk factor in the development of psychopathology with externalizing behaviours strongly associated with this category and a long term effect of possible dissociative behaviour later in life (van IJzendoorn, Schuengel & Bakermans-Kranenburg (1999).

As discussed in the introduction, in cases where loss or trauma occurs after childhood experiences, Bowlby (1980) proposed that it is the foundation of early experiences that provides the mechanisms for positive adaptation and protect against the development of psychopathology. Those who have a secure attachment are likely to have positive interpersonal relationships to draw upon for support and self belief in their ability to mange the current situation. Those with insecure styles will have less protective mechanisms in place and arguably more vulnerable to the 'disorganizing' impact of loss or trauma. Indeed, major losses, those of attachment figures, cause temporary cognitive disorganisation as there has, by the nature of the loss, to be a reorganisation of the attachment system (Main & Goldwyn, 1996) although active monitoring of discourse around loss facilitates integration of this experience.

Unresolved attachment can occur where childhood abuse, at the hands of an attachment figure, prohibits the integration of both a sense of self and other. This is where a 'fearful' internal working model is found (e.g. avoidance of others and high anxiety about the self) (Bartolomew & Horowitz, 1991) that disrupts an individual's ability to regulate their emotions (Carlson & Sroufe, 1995). When there are incidents of repetitive trauma, the effect on emotional regulation goes a step further, and into what serves as a survival function, where reoccurring trauma is associated with high levels of dissociation in adulthood (Liotti, 1994; Ogawa, Sroufe, Weinfield, Carlson & Egeland, 1997; Sroufe et al., 1999; Sroufe, Egeland, Carlson & Collins, 2005). It is caused by an individual's need to separate painful

and overwhelming experiences that would otherwise inhibit their functioning, and allows for escape from the constraints of their lives. This increases their vulnerability to developing psychopathology as the bias of their internal working model is likely to interpret ambiguous experiences as negative and/ or threatening and thus the individual distances themselves further from reality.

1.4.5 Conclusion regarding underlying mechanisms

It is proposed that an insecure attachment style maintains a stance of defensive exclusion or over inclusion of distress that makes it difficult for the individual to modify their internal working models of self and other thus leading to discrepancies and an inability to fully integrate these experiences (Crittenden, 1992). As Kobak and Duemmler (1994) point out, an individual will selectively attend to information where inaccurate interpretations and expectations about self and other are made. Arguably these maladaptive models then become more resilient and less adaptive to reality (Dozier, 1990). Bowlby (1969/ 1982, 1973) himself argued that pathology would be a the result of current situational challenges and past attachment experiences and that after cumulative maladaptation, represented by biases in internal working models, changes would be difficult to make and behaviour increasing predictable according to internal representations. Sroufe et al. (1999) also suggest that these models are more likely to break down under stress due to an inability to cope with frustrations and negative affect. Therefore, those with insecure attachment who utilise maladaptive emotion regulation strategies and have high levels of interpersonal difficulties are more vulnerable to developmental psychopathology than those with a secure attachment.

As a note of caution, however, Scott Brown and Wright (2001) highlight a misconception that insecure attachment is considered to equal ‘pathology’ in comparison to secure attachment viewed as ‘normal’. Poor adaptation may have been associated with insecure styles but as stated above, causality has yet to be established. Therefore this author argues attachment to be a risk or vulnerability factor, rather than the cause, in the development of psychopathology. This next section, therefore, focuses on the empirical evidence investigating attachment and psychopathology.

1.5 Empirical research of attachment and psychopathology

Considering the vastly different adaptation to interpersonal relationships and distress that occurs between the insecure attachment groups, investigators have found that type of insecure attachment can differentiate types of psychopathology. When considering

dismissing attachment styles there would be an expected association with psychological disorders that had an externalizing focus (Bakermans-Kranenburg & van IJzendoorn, 2009a) reflecting the minimising strategy of this group and attempts to deflect the focus on internal distress to over regulate these emotions. Psychopathology associated with dismissing styles are eating disorders (Cole-Detke & Kobak, 1996; Fonagy et al. 1996; Ward et al., 2001), schizophrenia and schizoaffective disorders (Tyrell & Dozier, 1997), first episode psychosis (MacBeth, Gumley, Schwannauer & Fisher, 2011) anxiety with externalizing symptomatology (Dozier, Stovall & Albus, 1999), co-morbid conduct disorder and depression and antisocial personality disorder (Fonagy et al, 1996; Rosenstein & Horowitz, 1996). However, conduct disorder and antisocial disorders were also significantly associated with preoccupied and unresolved attachment classification. The conceptualisation of externalising disorders, within a dismissing framework may therefore, need some revision. Perhaps some individuals utilise an external focus to draw their attention away from their internal distress. The subsequent involvement of attachment figures may therefore be due to them displaying difficult behaviours, and so it is a maligned but accepted consequence for the individual rather than a desired outcome. On the other hand, it is conceivable that individuals with a preoccupied attachment style may not know any other way to gain attention for their current levels of distress and engage in antisocial behaviour in efforts to gain attention. Perhaps psychopathology is a reflection of the exaggerated and/ or controlling standards an individual has applied to their attachment related experiences (Cole-Detke & Kobak, 1994). This is certainly an area for further work and again highlights the need to investigate the underlying mechanisms that influence the development of psychopathology within the context of attachment.

Bowlby (1980) proposed that affective disorders have developmental pathways including early loss and a negative model of self which is maintained by an individual's insecure internal working model viewing themselves as unlovable and others as unloving. This is particularly prominent in the aetiology of anxiety disorders (Bosquet & Egeland; 2006; Bowlby, 1973; Cassidy, 1995; Thompson, 2001). A negative sense of self and a need to have validation and acceptance from others is found in preoccupied attachment styles. Thus one would expect this attachment style to be over represented in this group of difficulties where maximising expressions of distress are utilised in attempts to gain acceptance and response from others. Indeed, as may be expected preoccupied attachment dominates classification for anxiety disorders, mixed affective disorders and substance abuse (Dozier, et al. 1999; Fonagy et al, 1996) mixed unipolar affective disorder (Rosenstein & Horowitz,

1996), depression (Fonagy et al. 1996), comorbid depression and eating disorders (Cole-Detke & Kobak, 1996), eating disorders (not specified type) (Fonagy et al. 1996), suicide ideation and borderline personality disorder (Bakermans-Kranenburg & van IJzendoorn 2009a; Fonagy et al, 1996; Patrick, 1994). Of note, however, is that particularly in the cases where preoccupied style is dominant, when four way analysis was conducted with mixed affective disorders, anxiety disorders, substance abuse and borderline personality disorder groups, an average of 90% of these cases were classified as primarily unresolved in relation to loss or trauma with a secondary preoccupied placement. This would suggest there are shared mechanisms in both preoccupied and unresolved attachment underlying this pathology. A lack of emotion regulation capabilities could be this mechanism where a belief that they themselves cannot manage their distress is inherent in both these attachment styles and hypothetically could lead to more anxious symptomatology.

In attempting to determine if insecure attachment was more common in psychiatric compared to non psychiatric populations, Fonagy and colleagues (1996) conducted AAIs, utilising a cross sectional design, with 82 consecutively admitted psychiatric in-patients (mean age 29 years) and examined the presence of Axis I and Axis II disorders. When considering four way analysis the authors found a significant association between anxiety disorders (including generalised anxiety disorder, phobia, obsessive compulsive disorder and somatoform or stress disorders) and unresolved classification (χ^2,(df=3)=8.4, $p<0.05$) but small numbers across the four classifications prevented further analysis. The authors hypothesize that anxiety perhaps reflects the extent to which past trauma is experienced in the present. It could be represented in the unresolved classification where fear of attachment figures or fear of loss dominates an individual's internal working model. Either way, this anxiety could be viewed as the mechanism prohibiting the individual integrating their experiences and thus remaining unresolved. It may also represent current anxiety caused solely by the traumatic experience, however, thus leaving the direction of causality unclear. A similar case could be made for depression as this has also been associated with preoccupied or fearful/ unresolved attachment styles (Bakermans-Kranenburg & van IJzendoorn, 2009a; Hammen et al, 1995) where levels of depression could represent the experience of past trauma in current experiences or could be a consequence of the trauma or loss itself.

Interestingly, Bakermans-Kranenburg and van IJzendoorn (2009a) also found a significant overrepresentation of unresolved attachment in their samples of individuals suffering from

PTSD or who had experienced abuse. Surprisingly, however, this group did not have an overrepresentation of insecure attachment style that has commonly been found in clinical samples. This raises the question of whether the 'disorganising' effect of trauma and abuse is universal across attachment classifications where the underlying protective mechanisms assumed to exist in secure attachment make no difference. This is an important area to explore, to see if there are common mechanisms in the unresolved attachment style that have a direct link to the development of psychopathology regardless of fundamental 'organised' attachment style.

Secure attachment styles are hugely under represented in clinical populations, approximately less than 20% (Bakermans-Kranenburg & van IJzendoorn 2009a), and rarely reported with analysis instead focusing on the negative associations with insecure attachment style and psychopathology. However, Dozier (1990) found, and did report an association between security in attachment in individuals with affective disorders (manic depression and major depression) compared to those with thought disorders (schizophrenia and atypical psychosis) in a group of 40 young adults. Affective disorders were found to have greater attachment security that thought disorders, a result that demonstrates the need for further discussion of this study. The Attachment Q set method (Kobak, 1989) of assessing attachment, used by Dozier (1990) requires answers to a series of statements derived from the Main et al. (1985) criteria for AAI classification. Two dimensions of attachment are then assessed. The first is a secure/ anxious dimension where higher scores are associated with secure attachment whilst the second dimension assesses the strategies used by individuals to reduce their distress. Individuals with affective disorders are hypothesised to under regulate their emotions and consequently display distress in efforts to gain consistent reactions. Perhaps the inner representations of distress are more accurate and have been integrated in this group who are therefore more likely to be coded as secure in comparison to those who over regulate their distress. Indeed, schizophrenia and psychosis have previously been associated with dismissing attachment styles where avoidant strategies would be expected to by employed in efforts to minimise distress, which are associated with lower levels of security in attachment. It should also be noted, however, that although the affective group had higher levels of attachment security in this study than the other clinical group they still had significantly lower levels than the control group.

As a final comment in this section, very little work has looked at outcome and the effect of attachment in relation to overall levels of distress within psychopathology. However, Fonagy

et al. (1996) investigated whether attachment classification made a difference to individual outcome after psychotherapeutic intervention including individual and group psychotherapy, nursing, social and occupational therapy. They found that half their clinical group showed improvements in overall functioning after psychotherapy with the dismissing group proportionately improving the most (93% compared to 41% of those with preoccupied attachment and 33% of those with a secure attachment style). This work is encouraging to see but unfortunately the authors do not detail their therapeutic intervention so it remains unclear how they improved individual functioning, where the focus of therapy lay or how it may have worked in relation to attachment classification.

1.6. Adolescence - Attachment, psychopathology and non clinical populations

Adolescence is the period seemingly dominated by an individual's attempt to separate and individuate away from their parents. This period of great transition is where the individual develops a more definitive sense of self and other (Bowlby, 1973) through the development of formal operational thinking that provides new opportunities to reflect on experiences (Main et al., 1985). However, little remains known about the mechanisms differentiating adolescents with temporary or transient difficulties and those with more prolonged or psychopathological difficulties. As adolescents question or challenge their beliefs about their identity and feeling towards themselves and others during this period, it is suprising to note the dearth of literature examining these issues within an attachment context. How an individual makes sense of themselves and their perceptions of others in both typical and atypical adolescent development may have the potential to explain some variance in individual outcome within an attachment framework. As there has not been a vast amount of empirical work investigating the adolescent period with regards to attachment and even less in clinical populations (Scott Brown & Wright, 2001) the following section will first consider attachment research with non clinical adolescent populations followed by empirical evidence from clinical samples.

Whilst the main focus of this section will be on insecure attachment and psychopathology, there should be recognition of the potentially protective nature of a secure attachment during adolescence. Kobak, Sudler and Gamble (1991) found a secure attachment was associated with lower depressive symptoms rated by individuals both at the time of the AAI and 10 months prior to completing it. The authors suggest a secure attachment allows for the flexibility to consider the self and others in an integrated way that protects the individual from experiencing a negative model of self which can produce cognitions synonymous with

depression, (i.e. I am worthless). Furthermore, a study conducted by Scharf, Mayseless and Kivenson-Baron (2004) investigated the effect of attachment styles on three developmental tasks, leaving home, individuation and developing the capacity for mature intimacy in a sample of male teenagers aged 17-18 and followed them up three years later. Although genrealisability is limited due to this being a population in Israel that was assessed before and after conscription some interesting results were obtained. A secure attachment was found to predict better coping when leaving home in comparison to those with insecure attachment with these individual's peers also perceiving them to cope better than peers of insecure individuals. A higher capacity for mature intimacy was also associated with a secure attachment. Interestingly, no difference was found between attachment styles for the developmental task of individuation measured by an individual's capacity to make autonomous decisions and self efficacy ratings.

When considering psychopathology, Kobak and Sceery (1988) found, in a non-clinical sample of 53 of adolescents (mean age 18.2 yrs), those with a secure attachment reported less distress on a measure of psychopathology and higher perceived social competence and support from family. Those with preoccupied attachment reported higher levels of distress and lower perceived social competence. In results similar to those described earlier, the authors found adolescents with dismissing attachment styles to report little distress and no difficulties with social competence, like the secure group, yet their peers rated them as more hostile. Berger, Jodi, Allen and McElhaney Davidson (2005) also found discrepancies between self and other reporting in a group of at risk adolescents. Those with a dismissing attachment style were less likely to report externalizing symptoms compared to parents and behavioural conduct difficulties compared to close friends. Adolescents with a preoccupied attachment style reported higher levels of both internalizing and externalizing symptoms in comparison to their parents.

Reflecting similar results when assessing interpersonal difficulties in a late adolescent/ young adult group (mean age 19.6 yrs; range 18-22), Bartholomew and Horowitz (1991) found those with preoccupied attachment rated interpersonal difficulties specifically in the area the authors termed 'warmth-dominance' reflecting an overly expressive self (e.g. 'I want to be noticed by others too much'). The authors aim was to examine an individual's perception of their close and romantic relationships and found that these perceptions predicted that individual's interpersonal functioning. Interestingly the dismissing group did highlight interpersonal difficulties rating themselves as lacking in warmth. Whilst this shows

uncharacteristic insight within this group it should be noted that this is not a clinical group and as highlighted earlier, an insecure attachment style is not synonymous with pathology. Those with a 'fearful' attachment style (equivalent to unresolved in the AAI) demonstrated two areas of interpersonal difficulties; social insecurity experienced as lacking assertiveness and being socially inhibited.

In a study of a community sample of adolescents (mean age 16.9 years, SD±1.98) Cooper, Shaver and Collins (1998) focused on the adjustment and well-being of individuals within the context of attachment and looked at symptomatology, risky behaviour and social competence. Gender differences were found where males were more likely to report themselves a secure in comparison to females who rated themselves as more avoidant. The differences may not, however, represent a true discrepancy as the authors used a self report measure assessing romantic attachment. The reporting bias of individuals who are avoidant reporting a secure style have been discussed in previous sections and may well be in play here. The group classified as avoidant reported that they had been in fewer romantic relationships so were less likely to have experienced difficulties in interpersonal relationships, whereas those with anxious classifications had been in significantly more romantic relationships than the secure group. Associations were found between better adjustment (i.e. less risky behaviour) and reported symptomatology in the secure group whereas the anxious group demonstrated the poorest adjustment across all measures including self concept, risky behaviours and symptomatology. However, in a finding contrary to previous discussions, Cooper et al, (1998) found the avoidant group reported similar levels of symptomatology (including anxiety, depression, hostility paranoia) as the anxious group and poorer self concept than the secure group (although risky behaviour was not different). This suggests that the level of self awareness is perhaps greater in this group than previously thought but again, this population was not clinical so reporting on romantic attachments and symptomatology would have been of less relevance and less threatening to their attachment system especially considering they reported significantly less involvement in romantic relationships than the other groups.

1.6.1 Mechanisms of mediation in adolescent populations

The study by Cooper at al., (1998) also included a mediational analysis considering the differential experience of distress and social competence experienced within the secure, avoidant or anxious groups. Very few studies have investigated the subjective experience of distress on outcome within the context of attachment. The authors noted that a partial

mediation model was in existence where social competence and the experience of distress (hostility and depression) accounted for some of the differences in problematic behaviours across the groups. As the authors note, anxious individuals were significantly more hostile than the other groups and they suggest engagement in risky or problem behaviours was used as a way to express this hostility. Conversely, those with avoidant attachment styles still reported distress but were unable to engage in socially risky behaviours due to their lower levels of social competence with this level of competence therefore acting as a mediator between distress and risky behaviour.

Lee and Hankin (2009) extended adolescent psychopathology literature further by carrying out structural equation modelling (SEM) examining if the cognitive factors of dysfunctional attitudes and low self esteem mediated the relationship between attachment and psychopathology. The authors used a cross-sectional design and collated a non clinical sample of 350 adolescents (mean age 14.5 years, sd±1.4 years, range 11-17 years) and administered the ECR (see section 2.3.2.1), a self report measure assessing insecure attachment from a dimensional perspective of avoidant or anxious attachment. Using SEM, the authors found that avoidant attachment directly predicted depressive symptoms five months after entry into the study but that the relationship between anxious attachment and depressive symptoms was fully mediated by both cognitive factors, dysfunctional attitudes and low self esteem with the overall fit of the model being very good (CFI=0.96, non significant (χ^2 (5)=50.72). Similarly, avoidant attachment was also found to directly predict anxiety symptoms five months into the study whereas, again, anxious attachment was fully mediated by the two cognitive factors with the overall fit of the model being very good (CFI=0.96, non significant χ^2 (5)= 36.93). This is one of the first non clinical adolescent samples to demonstrate there are underlying mechanisms that directly affect the relationship between attachment and psychopathology. The case for underlying factors mediating the link between attachment and psychopathology is further evidenced by the work of Mayer, Muris, Meesters and Zimmerman-van Beuningen (2009). They investigated eating problems in a non clinical population of adolescent females (n=301, mean age = 17.7 years, sd±1.3 years) and utilized a cross sectional design. The authors found significant correlations between insecure attachment and higher levels of depression, lower self esteem and high levels of eating problems. However, when carrying out regression analysis, only depression and self esteem had a direct relationship with eating problems (β = 0.17 and -0.30 respectively) suggesting that these factors mediate the effect of insecure attachment that can therefore be proposed to have an indirect pathway to eating pathology.

Furthermore, Bosquet and Egeland (2006) conducted a study using the sample (n=155) from the Minnesota Longitudinal Study of Parents and Children, where all participants has been assessed for their attachment style in infancy using the SSP at 12 and 18 months where 29% were coded as insecure at both time points. The authors were examining the etiology of anxiety through the lifespan and attachment was one area where they examined insecure attachment in relation to peer representations in childhood and anxiety in adolescence. Bosquet & Egeland (2006) found that insecure attachment predicted negative representations of peers in preadolescence (β=-0.25, t=-3.12) and that this, in turn, predicted anxiety in adolescence at age 16 years (β=-0.23, t=-2.83) and 17.5 years (β=-0.17, t=-2.16). This highlights the mechanism of social relationships in underlying the relationship between attachment and psychopathology. It also demonstrates a potential risk factor for the development of psychopathology in adolescence where early attachment relationships play a role in the cognitive and emotional representations that form internal working models and that those with insecure working models to have negative evaluations of others of being either unavailable or unreliable (Bowlby, 1973). Of course all of these findings need replication and particularly within clinical populations of adolescents.

1.6.2 Adaptation in adolescent populations

Using a stratified random sampling approach, Keskin and Çam (2010) investigated attachment in relation to psychological adaptation in a non-clinical group of 384 young adolescents (mean age12.1 years ± 1.4). Using the Strengths and Difficulties Questionnaire (SDQ: Goodman, 2001) to assess psychological adaptation across domains of conduct problems, hyperactivity-inattention, emotional symptoms, peer problems and prosocial behaviour, and the RSQ, the authors found significant differences across gender and attachment style. They found females more likely to report higher emotional difficulties than males but also higher levels of prosocial behaviour (t=4.03, p=0.000, Cohen's d=0.44) whilst males rated higher levels of peer problems (t=2.28, p=0.023, Cohen's d=0.32). These gender differences could also be explained by attachment styles as females have been found more likely to have preoccupied attachment styles and therefore more likely to report distress (Rosenstein & Horowitz, 1996). However, Zahn-Waxler, Cole and Barrett, (1991) found that individuals with a dismissing style were likely to report more emotional difficulties, a result contrary to what would be expected considering the minimising strategy usually employed by this group, a result also found by Cooper et al, (1998). What may account for discrepancies in the reporting style of the dismissing group is that the SDQ was designed as

a screening tool for difficulties in non-clinical populations so may not activate the attachment system in the same way as questionnaires developed for psychiatric populations do, therefore the minimising strategy of those with a dismissing attachment would not have been employed as intensely.

Keskin and Çam (2010) also found a fearful attachment style to be associated with higher levels of emotion difficulties ($p=0.022$, $r=0.117$) and overall levels of difficulty ($p=0.014$, $r=0.125$). The suggestion here of poor adaptation in this group is not surprising given the disruption of emotion regulation that is associated with this attachment style (Carlson & Sroufe, 1995). In contrast, the robustness and integrative nature of secure attachment styles was evidenced in this study where this group demonstrated negative correlations across all four levels of difficulties and positive correlations with the prosocial scale on the SDQ.

Lapsley, Varshney and Aalsma (2000) conducted a study with a group of non-clinical older adolescents (mean age 20.60 years, sd±3.71 years) in attempts to explore attachment and the prediction of symptomatology and adjustment. They found an insecure attachment style predicted depression (accounting for 9% of the variance), poor college adjustment and poor separation-individuation (accounting for 10% of the variance). Of particular relevance here is the latter outcome. Individuation – separation is the key developmental task of adolescence where difficulties in differentiating self and other can lead to overly enmeshed attachment relationships, difficulties in interpersonal interactions and failure to explore paralleled in infant insecure classification in the SSP (Ainsworth et al. 1978). This difficulty may also explain the poorer college adjustment of those with insecure attachment styles. The novel situation of starting college will induce anxiety and activate the attachment system in the majority of individuals. In this situation, those with dismissing or preoccupied styles utilise biased internal working models that can lead to subsequent difficulties in interpersonal interactions and consequently they find college a more difficult experience to adapt to than those with a secure attachment style. Lapsley and colleagues (2000) also measured attachment pathology (e.g. compulsive care seeking), and although not convergent with attachment style, it demonstrated strong association with psychopathology. In particular they describe compulsive care seeking where an individual defines life as problematic and that they need assistance, where the focus of attachment relationships is rated as the receiving of care and that attachment figures are considered to be responsible for major parts of the individual's life. This facet of pathology was consistent as a predictor of

symptomatology across a range of mental health difficulties including obsessive compulsive disorder, depression, somatization and interpersonal sensitivities.

This section has provided an introduction to symptomatology an distress experienced by adolescents from community samples. The next step is to consider developmental psychopathology within clinical adolescent populations.

1.7 Empirical research of attachment and adolescent clinical populations

Insecure attachment has to be considered a risk factor in the development of psychopathology within adolescence with consistent over representation of this type in clinical populations found in both with 3 and 4 way analysis with unresolved attachment also over represented (Bakermans-Kranenburg & van IJzendoorn, 2009a; Broberg, 2001; Beijersbergen et al, 2008).

Rosenstein and Horowitz (1996) conducted AAIs with 60 psychiatrically hospitalised adolescents and found only 3% to be secure, 47% dismissing and 50% preoccupied. In four way analysis the results were 2% secure, 38% dismissing, 42% preoccupied and 18% unresolved. The authors confirmed their hypothesis that the adolescents classified as having affective disorders would have a preoccupied attachment style and those with conduct disorder would have a dismissing style ((χ^2,2,51=11.694, p<0.003 (3 way) (χ^2 ,4,54=18.584, p<0.001 (4 way)). These authors also found substance misuse within this sample to be significantly associated with a dismissing attachment style (χ^2,1,29=4.48,p<0.034). Interestingly, males had significantly higher rates of dismissing attachment style compared to females (75% vs 25%) and females more likely to have preoccupied attachment styles (63% vs 37%).

Of note, however, is that when Rosenstein and Horowitz (1996) forced a 3 way categorisation, the clinical sample was reduced from 66 to 40 (due to 16 participants not having one clear organised attachment strategy) and when comparing the groups in 3 way analysis after controlling for gender and socioeconomic status, the association between hospitalisation and dismissing attachment became insignificant. In preliminary analysis the authors found males to report higher levels of psychological distress and similarly so did those with low socio economic status. This contrasts previous findings where males have been associated with dismissing attachment styles whereby a ‘minimising’ strategy is adopted to suppress the expression of distress. In attempting to explain the non significant

association, perhaps the higher levels of distress recorded in males in this study has led to an under representation of individuals usually expected in the dismissing category and therefore the significance disappears. Or perhaps the socio-economic status of the adolescents hospitalised is significantly lower thus leading to higher levels of distress reported and consequently these individuals were less likely to be classified as 'dismissing'.

Scott-Brown and Wright (2003) found higher levels of reported symptomatology in adolescents with a preoccupied attachment style in comparison to the dismissing or secure groups (Mann Whitney, $p<0.05$) in their sample of 15 adolescents referred to tertiary mental health services and 15 age, gender and social class matched controls. Interestingly the authors did not differentiate between their groups, one of the only studies to do this. They found a high representation of insecure attachment classification within the clinical population but that high distress was noted across both groups this giving an indication that levels of distress are not necessarily linked to psychopathology, rather, they are more generalizable to attachment styles and it is the mechanism of emotion regulation that underlies the relationship between attachment and mental health difficulties.

In a cross-sectional study, Allen, Hauser and Borman-Spurell (1996) compared adolescents psychiatrically hospitalised at 14 to a socio-demographically similar group and measured the attachment organisation of individuals from both groups when they reached 25. They used the AAI and looked at both 5 way categorisation, including the 'unresolved' and 'cannot classify' groups, but also forced analysis into a 3 way classification. The authors found significant differences between the groups for both 5 way ((χ^2=29.13, $p\leq0.001$) and 3 way ((χ^2=17.7, $p\leq0.001$) where those hospitalised at 14 demonstrated significantly more insecure or unresolved attachment styles than the control group. In fact, only 7.6% of those who had been hospitalised had a secure attachment in comparison to the control group where 44.7% were classified as secure. Allen and colleagues (1996) also broke these results down into particular subscales on the AAI where coherence of transcript scores[5] were the found to be higher in the control group ($t=5.74$, $p<0.001$) and unresolved trauma or loss scores were higher in the clinical group ($t=3.97$, $p<0.001$). Using MANCOVAs, the authors investigated attachment and the current psychopathology of the young adults who had previously been hospitalised, found that it was related ($F(16,376)=1.96$. $p<0.02$) specifically those who had been deemed 'cannot classify' had higher levels of psychological distress. Although the

[5] 'Coherence of transcript' is a final subscale used in coding the AAI to reflect the 'bottom up' and 'top down' coding methods formulated by Main and Goldwyn (1985) and provide the foundation for the categorical placement of the individual into an attachment classification.

authors postulate a casual relationship between earlier insecure attachment in the development of psychopathology they were unable to confirm this with their methods of analysis, thus leaving analysis at an association level.

As discussed earlier, there is evidence of an unresolved attachment style being a risk factor in the development of psychopathology and this has also been found to be true of adolescent clinical populations. Adam, Sheldon-Keller and West (1996) compared attachment classification (using the AAI) of 133 adolescents receiving psychiatric care, 69 with a history of suicidal behaviour (mean age 15.7 years) and 64 without (mean age 14.9 years). Both groups had similar levels of trauma but 73% of those with suicidal behaviour demonstrated lapses in reasoning and discourse about their attachment related trauma experiences compared to 44% of those without suicidal behaviour and were subsequently coded with a primary 'unresolved' attachment state of mind. The biggest difference between groups occurred specifically in relation to abuse from an attachment figure (71% in the case group compared to 29% in the comparison group: (χ^2 (1,65) = 10.58, p<0.001). As discussed earlier, a U category placement is indicative of an incoherent narrative when discussing loss and/or trauma and reflects disorganised and/ or disorientated cognitions where the individual fails to monitor their discourse. Their levels of distress inhibit active monitoring and Adam et al. (1996) posit that this disorganisation mediates the relationship between trauma and suicidal behaviour where higher levels of distress lead to suicidal action significantly more than ideation. Previous research had also found that current loss or interpersonal difficulties, common precursors in suicidal behaviour in adolescence, can lead to cognitive disorganisation thus contributing to overall behavioural disorganisation in a suicidal crisis (Spirito, Brown, Overholser & Fritz, 1990). In their meta-analysis of attachment representations in clinical populations, Bakermans-Kranenburg and van IJzendoorn (2009) found very strong association between the U classification and psychological difficulties including suicide and abuse.

Brown (2003) proposed that physical abuse in childhood is a risk factor and mechanism for the development of psychopathology and that the usual developmental trajectory of a child is disrupted particularly if the perpetrator is an attachment figure (Wallis & Steele, 2001). These disruptions continue into adolescence and manifest themselves in difficulties with affect regulation, social skills and attachment relationships. Within the context of attachment theory, if this disorganisation of behaviour was also reflected by a disorganisation of narrative and/ or the mind, a U category placement would be made with respect to abuse.

The emergence of work specifically investigating the longitudinal effects of child abuse certainly provides evidence of how adverse attachment related experiences can lead to developmental difficulties increasing an individual's vulnerability to developing psychopathology. For example, Pollak and Kistler (2002) found maltreated children to have difficulty reading emotional expressions in others and labelling ambiguous faces as angry. This hyper vigilance could arguably be a mechanism for the development of psychopathology (Brown, 2003; Keskin & Çam, 2010). On the other hand, the question has been posed about the protective nature of a secure attachment and whether this underlying state of mind plays a role in helping an individual integrate these extreme experiences but unfortunately the small number or secure transcripts in clinical populations has prohibited further analysis (Broberg, 2001).

Hankin (2005) made links between early childhood maltreatment and later depression in adolescence hypothesising that strategies employed to deal with adverse events leave an individual vulnerable to developing depressive symptomatology. This can be linked to an attachment framework whereby individuals with insecure attachment styles utilise strategies that are likely to make negative inferences about themselves, others and their situation. These negative inferences continue potentially leading to a negative cognitive style that is reinforced by subsequent negative life events, all of which has been linked to the development of depressive symptomatology (Beck, 1987; Hankin, 2005)

Very limited work has been carried out investigating adolescent attachment, psychopathology and outcome but Armsden, McCauley, Greenberg, Burke & Mitchell (1990) did just that in a highly relevant and interesting study using a sample of 10 to 16 year old clinically depressed adolescents, non-depressed psychiatric controls, non-psychiatric controls and adolescents with resolved depression. For adolescents with any form of psychiatric difficulty there was a negative correlation between security in parent relationships and severity of depression on both self report and interview measures. There are two areas to note. Firstly, security in attachment relationships (with both parents and peers) in the resolved depression group was similar to that of the non-psychiatric controls suggesting a secure attachment provides mechanisms and adaptability within the individual to integrate their distress and experiences. This is particularly relevant when the same study also found less secure attachment with parents was associated with maladaptive attribution styles and history of suicidal ideation. The second point to note is particularly relevant to adolescence in that it was less security with parents that was associated with

symptomatology, not a lack of security in peer relationships. This may be suggestive of an inherently protective nature of peer relationships within this developmental stage highlighting the hypothesis of Allen and Land (1999) that adolescence is a period of transitional change in relationships and that parents may not be the only attachment relationship of importance. Indeed, the authors noted the difference between internalizing and externalizing symptomatology in adolescent populations and hypothesised that these behaviours not only allowed the individual to express their distress and pathology but also served to influence the dyadic parent child relationship. This is particularly relevant in adolescence where they begin to learn the predicative nature of their parents behaviour with the authors proposing externalizing behaviours to be more reflective of an individual with a preoccupied attachment style attempting to gain a response from their caregiver.

The majority of clinical adolescent empirical work has focused on attachment style and an association with psychopathology but what this thesis proposes, however, is that the attachment does not predict the materialisation of psychopathology but instead predicts the underlying mechanisms that increase an individual's vulnerability to developing mental health difficulties. For example, emotion regulation is one such mechanism that has been formulated to underpin the relationship between attachment and emotional distress yet works differently dependent on the style of attachment (e.g. emotions are over regulated in dismissing attachment and under regulated in preoccupied attachment).

1.8 Discussion of Part I

This chapter has discussed the theory and operationalisation of attachment constructs within general and adolescent clinical and non-clinical populations. It has been hypothesised that insecure attachment styles are underpinned by biased and rigid internal working models that prevents an individual from using flexible psychological adaptation when their attachment system is activated and they are experiencing distress. In comparison a secure attachment with a positive and flexible model of self and other facilitates adaptation within the context of satisfying social relationships.

The literature demonstrates a clear relationship between insecure and unresolved attachment styles and an over representation of these styles in clinical populations (Bakermans-Kranenburg & van IJzendoorn, 2009a). Indeed, the wealth of empirical evidence highlights insecure and unresolved attachment as a risk factor that can aid our understanding of the developmental aetiology of psychopathology (Jones, 1996) through investigating an

individual's early experiences with their caregivers. What is curious, however, is the lack of literature exploring adolescent attachment with the development of psychopathology in adolescence. Surely, as this chapter identified, adolescence is as a key developmental period in need of exploration in terms of how internal working models influence the ability to integrate the unique and demanding interpersonal experiences and life events that are experienced within this developmental stage. Indeed, if, as Bowlby (1969/ 1982, 1973) proposes, pathology develops from situational challenges faced in context of past experience, it is crucial to examine attachment within this vulnerable age group.

Whilst there have been attachment styles linked to specific psychopathology (e.g. dismissing to first episode psychosis, Macbeth et al., 2011), it is the level of distress experienced that primarily appears to predict outcome within attachment relationships (e.g. Armsden et al., 1990). In fact, high levels of distress have been proposed as a better predictor of outcome than clinical diagnosis in terms of psychological adaptation (Gumley & Schwannauer, 2007). If this is the case, investigating attachment in relation to the individual's perceived distress and psychological adaptation rather than diagnosis makes more sense, particularly in light of the finding of van IJzendoorn and Bakermans-Kranenburg (1996) who found no association between clinical diagnosis and attachment style. Let us remind ourselves of the 'goal' of the attachment system; to return to or maintain equilibrium in response to the activation of the attachment system where the individual is experiencing distress. How and if an individual achieves this will be the focus of this study.

Whilst there is an over representation of insecure attachment within clinical samples (Bakermans-Kranenburg & van IJzendoorn, 2009a; Broberg, 2001; Allen et al., 1996), unfortunately, the mechanisms underlying these associations has largely been overlooked for this critical developmental period. This is changing however, where work in the last decade has begun looking at possible causality with the relationship of attachment and developmental psychopathology and what effect this potentially has on the developmental trajectory of the individual. For example, the psychological adaptation of adolescents has been explored where factors have been found to mediate attachment and the expression of distress such as peer relationship (Boaquet & Egeland, 2006), social competence (Cooper et al., 1998), dysfunctional attitudes and lower self esteem (Lee & Hankin, 2009; Mayer et al., 2009). These factors can be considered within both an emotion regulation framework but also one of social support and this study proposes a model of mediation and moderation investigating attachment, interpersonal difficulties, emotion regulation and social support.

However, exploring psychopathology within the framework of attachment provides the challenge to explain how attachment experiences lead to variations in both mental processes and subsequent behaviour demonstrated within psychopathology (Scott Brown & Wright, 2001). One key concept that may help explain this variation and is integral to the development of successful attachment and interpersonal relationship is the theory of mentalization. Fonagy, Gergely, Jurist and Target (2004) propose that acquiring the skills for mentalization is an inherently social process that develops from early infant caregiver relationships and that the quality of these attachment relationships is fundamental to the successful development of mentalization skills. Through co-regulation, emotion regulation strategies are developed, mental states are made aware to both the caregiver and the infant and are inextricably linked to the regulation and organisation of self. It was therefore necessary to explain these attachment relationships first in order to present the reader with a clear and coherent depiction of secure, insecure and disorganised attachment and the association with interpersonal styles, emotion regulation and psychopathology before the construct of mentalization was introduced.

Part II - Mentalization

2.1 What is mentalization?

Mentalization is the focus on the mental states of self and others and these mental states are considered in terms of the beliefs, thoughts, feelings and wishes that exist both within and outside our conscious awareness. It is,

"*…the capacity to conceive of mental states as explanations of behaviour in oneself and in others.*" (p.544, Fonagy & Target 2006).

In this way, humans distinguish themselves from animal species whereby they respond to the mind of another rather than the behaviour. By understanding the meanings of our own internal representations we can give discover and understand our subjective intrapersonal experiences. By comprehending the meaning of the mental representations of others we can communicate interpersonally, interpreting their mental states and behaviour which lie at the foundation of successful social relationships. Mentalization has both cognitive and affective components, where an individual 'thinks about feelings and feels about thinking' (p. 271 Slade, 2005)

To facilitate mentalizing[6] and enable the individual to predict and anticipate the behaviour of themselves and others, three stances are considered necessary; the physical, design and intentional (Dennett 1978, 1987, 1988). The physical stance allows an individual to consider the physical properties of the person and environment and the design stance provides knowledge about the development of these factors. The final 'intentional' stance is the main construct in mentalizing whereby the individual is able to predict the most likely rational behaviour of another person based on their understanding of the other person's intentions (i.e. their beliefs, thoughts, feelings and wishes). They also come to understand themselves as an intentional being with the ability to change the mental states of others. From this intentional stance the individual interacts with their social and interpersonal world. Indeed, as Fonagy and Target (2005) discuss,

'our understanding of society relies upon our ability to see others as having a mind, as motivated by thoughts, feelings, wishes, beliefs and desires…a mentalized understanding of others is impossible if we cannot place our minds alongside those we wish to collaborate with and relate to' (p.334).

[6] Allen (2006) proposes that the term 'mentalizing' should be used instead of mentalization considering that it is a dynamic process which an individual can both do and/ or fail to do at any point throughout their life.

However, as Fonagy and Bateman (2006) highlight, mentalizing is a highly divergent process with capacity for it varying both between individuals and within an individual. The mind of another cannot be known with the same certainty that explains the environment for example, thus leaving interpretations of other's mental states vulnerable to bias. An imaginative leap is required to explain another person's behaviour from their mental states because these mental states are representation of reality not reality itself. In addition, mentalizing is also affected by the previous experiences, history and capacity to mentalize of the individual attempting to predict behaviour. At any of these points, the ability to mentalize could be compromised.

So how does an individual acquire the skills of mentalization, of becoming an intentional being, and why does it vary so differently between individuals? It is within the context of early caregiver relationships that mentalization skills are fostered (Arnott & Meins, 2007; Fonagy, Target, Steele & Steele, 1998; Fonagy et al., 2004; Meins, Fernyhough, Russell & Clark Carter, 1998; Slade, Grienenberger et al., 2005) thus making attachment theory the most pertinent developmental framework from which to consider it.

2.2 Mentalization in the context of attachment

Fonagy et al. (2004) propose that we are born without the knowledge of emotional states or how to regulate them yet we are all born with the capacity to mentalize. However, it is only through the interaction with a primary caregiver that the skills of mentalizing and emotion regulation develop. This process begins with affect mirroring, a form of representational mapping, within the dyad whereby the emotional state of the infant is reflected back to them by the caregiver which serves to organise the child's experience (i.e. they 'know' and can label their emotions by mapping the caregivers response to their self representation). In addition, by displaying 'markedness' (Fonagy et al., 2004) where the caregiver demonstrates that their mirroring is not actually how they feel and that they are not being overwhelmed by the emotion of the infant, the infant learns their emotions can be contained rather than contagious and that they can be regulated.

From the view of the mother, her role in recognizing her infant as an intentional being and monitoring their ever changing mental states is the basis for the sensitive responses that are key in secure attachment (Ainsworth, Blehar, Waters & Wall, 1978). The more able a mother is to mentalize i.e. being able to explore her own mind and being open to the mind of the infant, the less likely she will be to respond in interaction in a way that undermines her

infant's understanding of their own mind thus fostering a secure attachment between the two. Indeed, a number of studies have found that higher levels of maternal mentalization predict infant security (Arnott & Meins, 2007; Fonagy, Steele, Moran et al., 1991; Meins, Fernyhough, Russell & Clark Carter, 1998; Slade, Grienenberger et al., 2005).

Additionally, the integration of two modes in childhood further contributes to the development of mentalizing; 'psychic equivalence' and the 'pretend mode'. The former describes the mode where an individual has the early expectation that the internal world of themselves and others will match that of the external world and potentially distort their subjective experience to match information from the external world. The 'pretend' mode is a following stage where a child understands that their internal experience does not necessarily reflect external reality. When both of these modes are incorporated within the individual mental states can be seen as representations, where inner and outer reality exist both dependently and independently (Baron-Cohen, 1995). These experiences aid an individual to organize and understand their self representation leading to a coherent strategy for predicting the behaviours of self and other from the mental states of beliefs, wishes, goals and feelings.

This process also describes the optimum course for developing a secure attachment between caregiver and infant where the infant has experienced their caregiver as readily available at times of stress and arousal (e.g. when their attachment system has been activated). Their arousal will have been monitored by their caregiver, responded to through sensitive mirroring and comfort provided through proximity thus achieving regulation and, the goal of the attachment system, equilibrium within the infant. This secure attachment cultivates the infant's confidence in exploring and making attributions about the mental states of their caregiver to account for their behaviour (Bouchard et al. 2008). From here, they learn how to then match their mental state to their caregiver and can recognise emotions in others. Essentially, the development and organisation of the self occurs within interpersonal relationships and these experiences of self and other form into the internal representations Bowlby (1988) labelled internal working models. Where the foundation of the relationship is a secure attachment, the individual feels safe to explore the minds of others without fear of being emotionally overwhelmed (Sharp et al., 2009)

For individuals where sensitive caregiver interactions have been minimal or absent, insecure attachment develops where the only way to maintain proximity to the caregiver and achieve equilibrium is at the expense of developing reflective function (Fonagy et al, 2004). Those

who have developed a dismissing attachment style have experienced their caregivers as rejecting who are thus likely to have failed to accurately mirror emotions expressed by their infant, provided incongruent responses and or been intrusive in play. This causes the infant to shun the mental state of the other (and themselves) in attempts to regulate their negative affect and be able to remain close to the primary caregiver. Those with a preoccupied attachment have had their needs met with inconsistency where emotions have potentially been mirrored by the caregiver as contagious and when in play with the infant could have blurred the boundaries between reality and imagination. This would have resulted in an escalation in the arousal of their infant. The infant therefore learns to focus excessively on their own mental states to ensure proximity to the detriment of interpersonal interactions. Within the context of the insecure attachment Fonagy et al., (2004) highlight a vicious cycle whereby difficulties in understanding the mental states of others causes distress and thus activates the attachment system. The quest for proximity brings the infant closer to the source of confusion, rejection or neglect which inhibits their ability to mentalize further. Their efforts to engage with the caregiver are not reciprocated so the infant does not experience themselves as intentional agents nor are able to fully organise their sense of self.

Although mentalizing may not be absent within individuals who have had these experiences, whatever rudimentary form it has it is certainly vulnerable to breakdown in stressful situations or negative life events. If an individual has not experienced the integration of psychic equivalence and the pretend mode they are more likely to distort their subjective experience according to the happenings in their external world, which if negative, are likely to threaten and overwhelm them emotionally leading to the employment of non-mentalizing strategies. It is this vulnerability; the breakdown in their ability to mentalize that is hypothesised to send them on the developmental path towards the development of psychopathology from the breakdown of behavioural and emotional regulation (Sharp et al., 2009).

When an individual has a disorganised attachment style, a hyper vigilance of the mental states of others is made at the expense of monitoring their own mental state. Where the caregiver has been frightening and or frightened, the infant cannot find a representation of themselves in their caregivers mind when expressing their emotions. As a consequence they cannot organise their self representation nor perceive themselves as an intentional agent having the ability to influence the metal states of others. Arguably these individuals may have the ability to mentalize with regards to others, due to the overactive monitoring, but

will have a poor understanding of their own mental states. In this situation mentalizing does not fulfil the same role in self organisation hence the disorganised narratives and behaviours seen in these individuals when the attachment system is activated. There is, of course, ongoing dialougue regarding the evolution of mentalization, debating an evolutionary rather than ontogenetic framework for example, and how it is a transdiagnostic concept where deficits have been shown across a number of specific mental health difficulties and that these have implications of psychological adaptation (see Fonagy, Bateman & Bateman, 2011 for further discussion)

Whilst these early relationships of an individual provide them with the opportunity to learn mentalizing skills and provide the template for internal working models, Fonagy et al., (2004) argue that the most import element determined by these early experiences is actually the *quality* of how an individual processes the mental states of self and others. This is particularly relevant when considering the transitional period of adolescence which tests the mentalizing skills of all individuals. Indeed, there is also a continuing debate as to how best assess mentalizing skills and how it can be used as a therapeutic technique (Fonagy et al., 2011).

2.3 The challenges of mentalizing in adolescence

The developmental period of adolescence provides a unique challenge to an individual in the form of abstract thinking. With the achievement of formal operations, an adolescent can engage in abstract thinking and step away from the situation to consider the mental states of themselves and others but this also brings more complex emotions and cognitions to the fore (Fonagy et al. 2004). Arguably this new experience can be overwhelming so adolescents may need a break from this new experience and retreat from the mentalizing stance (e.g. socially withdrawing). If the quality of their mentalizing skills is not adequate, it may leave adolescents vulnerable to the development of psychopathology. When their capacity to mentalize is limited they are more vulnerable in stressful situations and therefore likely to distort the information and emotions they are processing potentially setting them on the path towards the development of mental health difficulties.

2.4 The measurement of mentalization

Mentalization is a construct that has developed in the past two decades. After conceptualization, there was a need to make it both tangible and measurable to further developmental research and investigate psychopathology. Fonagy et al. (1991) utilised the

term *'reflective function'* (RF) to describe the operationalization of mentalization, the psychological process that underlies the capacity to mentalize, and developed the reflective function scale measuring an individual's capacity to consider the mental states of self and other. As the authors write in their manual,

'RF involves both a self reflective and interpersonal component that ideally provides the individual with well developed capacity to distinguish inner from outer reality, pretend modes of functioning from real modes and intrapersonal mental and emotional processes from interpersonal communications' (p.25, Fonagy, Steele, Steele & Target, 1998)

2.4.1 The Reflective Function Scale (RF scale)

The RF scale was developed and manualized by Fonagy and colleagues (1998) as part of the London Parent – Child project (see Fonagy, Steele & Steele, 1991) where 200 interviews were conducted with pregnant mothers (n=100) and fathers (n=100). It is coded from the narrative of childhood memories in the Adult Attachment Interview (AAI; George, Kaplan & Main, 1985) and assesses RF in a number of ways; 1) the awareness an individual has of the nature of mental states, 2) the efforts they make to link mental states of the self and other to behaviour, 3) the revisions they make of mental states in the interview and 4) any recognition of mental states in relation to the interviewer. An overall score is provided and ranges from -1 to 9 reflecting a range from negative RF (-1) to exceptional or full RF (9) (see table 2.1 for detailed examples).

The RF scale has been utilised in normal, clinical and forensic populations. High RF scores on the AAI have been found to predict both mother and infant security on the AAI and SSP respectively (Arnott & Meins, 2007; Fonagy, Steele & Moran et al., 1991). RF scores have also been predictive of infant security where mothers have experienced deprivation. Interestingly, Fonagy, Steele, Steele, Higgitt & Target, (1994) found that in their sample where mothers had suffered deprivation, 100% of women with high RF had secure infants compared to just 6% of mothers with low RF having secure infants thus highlighting the importance of RF in facilitating secure attachment.

Table 2.1 Scoring representations of the Reflective Function Scale

RF Score	Sub classification (if applicable)	Examples
-1 (Negative RF)	A) Rejection	'How should I know, you're the psychologist'
	B) Bizarre	'What makes me feel more rejected is that she breast fed me. And she didn't breast feed my sister'
1 (Lacking in RF)	A) Disavowal	'I don't know, I really couldn't say'
	B) Distorting/ Self serving	'They thought of little else except what was good for their son, what might please me, they were quite preoccupied with these concerns'
3 (Questionable or low RF)	A) Naïve- simplistic	'well because they loved us and wanted to … give us, you know, a feeling of security, er, of being wanted um and a, a good start in life I suppose yeah
	B) Over analytical/ hyperactive RF	'I began to see that it takes two to tango… It was a perfect collusion between the two of them. What has been called in popular psychology, you know, the doormat tyrant relationship
5 (Ordinary RF)	A) Ordinary understanding	'Now I just want him to be healthy and happy with what he has <u>but I know once he's born</u> I'll want him to be Prime Minister'
	B) Inconsistent understanding	Inconsistent reflective stance. Maybe occasion or marked RF with incidents of low or questionable RF.
7 (Marked RF)		'Was anybody rejecting? Not really. It is funny… I remember both my parents as very loving and I think they were, and my sister and I got on extremely well. Yet if you asked me to describe the family I would say it was cold and somewhat rejecting. Somehow, perhaps because we tried not to show preferences, we all managed to make each other feel as if we liked somebody else. So we all managed to feel a bit rejected and unloved'
9 (Exceptional RF - less than 10% of interviews)		Almost surprising in complexity, consistent reflective stance, at time of conflict or difficulty.

2.4.2 The Parent Development Interview (PDI)

The PDI (Aber, Slade, Berger, Bresgi & Kaplan, 1985) is a 45 item semi structured interview that is used to asses a parent's internal working models, that are their mental representations of their child, themselves as a parent and the relationship they have with their child. Three factors representing the affective experience of the parent were identified, joy-pleasure/ coherence, anger and guilt-separation distress. A secure attachment (as assessed by the AAI) saw mothers scoring higher on the joy-pleasure/ coherence dimension and an insecure/ dismissing attachment was associated with higher scores on the anger scale.

The PDI was revised in 2004 (PDI-R; Slade, Aber, Berger, Bregsi & Kaplan, 2004) to adapt the manual developed by Fonagy et al., (1998) and score RF on the PDI. Low RF was associated with descriptive rather than reflective accounts of their infants internal experiences and denial of their own internal states. As Slade (2005) suggests, essentially this represents highly defended mothers who were unable, consciously or unconsciously, to understand their own or their child's mental representations which results in insensitive mirroring and the distortion of their child's experiences.

2.4.3 The Reflective Function Rating Scale

An alternative form of reflective function coding has been proposed by Meehan, Levy, Reynoso, Hill and Clarkin (2009) in the form of the Reflective Function Rating Scale (RFRS) a 50 item scale based on the scoring manual of Fonagy et al. (1998). It has demonstrated significant correlation between the RF scores on the AAI and 2 of the 3 factor subscales found on the RFRS; 'Defensive/ distorted' representations (α=0.94) (r=-0.36, p<0.04) and 'awareness of mental states' (α=0.95) (r=0.54, p<0.001) although this was only comparing a subset of 32 out of the 49 participants. A third factor, 'developmental' (α=0.92), where an individual considers that mental states can be influenced by generational upbringing, but this did not correlate to RF scores (r=0.25, p<0.16).

2.5 Empirical findings for RF and psychopathology

The empirical literature investigating reflective function and psychopathology is limited (Fischer-Kern et al., 2010) but has seen an upsurge in the last decade due to the development of tangible measurement scales. Using the RF scale in a psychiatric sample of 82 inpatients and a control group, Fonagy et al., (1996) reported average RF scores of 5.2 (sd±1.5) for the control group, indicating 'ordinary' levels of RF, and 3.7 (sd±1.8) for the psychiatric group, indicating 'questionable' or 'low' RF. The authors described their results further where

individuals with eating disorders and borderline personality disorder (BPD) had significantly lower RF scores than the other types of psychopathology (depression, anxiety, substance abuse, antisocial or paranoid personality disorder) which were 2.8 (sd±1.7) and 2.7 (sd±1.6) respectively. These results have been replicated.

Taking BPD first, it has received the largest amount of attention from the RF literature with impairments in mentalizing ability being associated with BPD (Fonagy et al., 1996; Fonagy et al., 2004; Fonagy, Luyten & Strathearn, 2001; Levy et al. 2006) and severity of pathology within personality disorders (Bouchard et al., 2008). As an example, Fischer-Kern et al., (2010) found an average RF score of just 2.7 (sd ± 1.2) in their sample of 92 female BPD patients and no one scored above 5 (ordinary RF). It is postulated that BPD develops from disturbed attachment relationships and can be further compounded by trauma or maltreatment that leads an individual to defensively inhibit the mentalizing skills they have making it an extremely interesting area for empirical study for both association and therapeutic treatment (e.g. see Fonagy & Batemen 2008; Bateman & Fonagy, 2008; 2009 for full review).

Considering eating disorders and RF, similarly low RF as found by Fongay et al., (1996) was discovered in an anorexia nervosa group where the majority also had insecure attachment as measured by the AAI (Ward et al., 2001). Rothschild-Yakur, Levy-Shiff, Fridman-Balaban, Gur and Stein (2010) compared reflective function across an inpatient sample for females with anorexia (binging/ purging subtype) and a matched non-eating disordered control group (mean age 18.2 sd±2.7 and 17.8 sd±2.31 respectively). A significant difference in RF scores indicated that the anorexia group had lower RF than the control group, 3.82 (sd±1.8) vs 5.77 (sd±1.46) ($F(1,67)=24.48$, $p<0.001$) yet when the eating disorder were split into subcategories of ‘drive for thinness’ and ‘bulimia’, the latter subscale was significantly correlated to higher RF scores ($r=0.36$, $p<0.05$). Bulimia symptomatology has been associated with insecure/ preoccupied attachment styles (Candelori & Ciocca, 1998) where an individual has a higher awareness of their own internal states and are therefore more likely to reflect on them in the AAI resulting in a higher RF score which could account for this finding. It should also be kept in mind that the average RF score for this group still represented ‘questionable’ or ‘low’ RF.

Levinson and Fonagy (2004) investigated the RF scores in a forensic sample with psychiatric disorders in comparison to an inpatient and control group. Whilst the authors acknowledge

the small samples size (N=22 for each group) the RF scores differed significantly between the inpatient and prison group (3.7 sd±1.5 and 2.5 sd±1.8 respectively and both significant at $p<0.01$) with the violent (against person) offenders scoring lower than the less violent (against property). The control group, similar to Fonagy et al., (1996), scored 5.8 (sd±2.3). It could be argued that these results represent a necessary disavowal of reflective function in violent prisoners where they cannot allow themselves to think of their victim in terms of mental states, or perhaps they have had harsher childhoods where mentalization was not fostered. Unfortunately definitive conclusions cannot be drawn from this largely descriptive work but it provides interesting insight into RF nonetheless.

The psychiatric sample results of 'questionable' or 'low' RF scores have recently been replicated in a first episode psychosis sample, utilising a cross sectional cohort design, where the median RF score was 3 (Macbeth, Gumley, Schwannauer & Fisher, 2011). In relation to the AAI classification system however, an interesting discrepancy appeared. Although individuals with a secure attachment scored higher RF than those with a dismissing attachment style (M–W: $U = 40.0$, $p = .012$), a result that is expected, there was no difference between those with a secure attachment or preoccupied attachment style. This could possibly be a reflection of hypervigilence to the mental state of self and or others that is often seen in preoccupied narratives on the AAI. On the other hand, it could be a result of an over representation of a dismissing attachment style within this population (61.8%) and smaller number of secure or preoccupied individuals (26.5% and 11.8% respectively). To perhaps answer this, the work of Bouchard and colleagues (2008) should be considered. The authors found low RF to be associated with a range of psychopathology (e.g. depressive disorder, bipolar, dysthymia, substance abuse, OCD and personality disorders) and that it predicted attachment security where one standard deviation increase in RF increased the likelihood of having a secure attachment by 2.74. Bouchard et al., (2008) also found that RF was more sensitive to the subject's elaboration of the mental states of the other, specifically the attribution of affects to another, ($r=0.44$, $p<0.01$), but not to the mental states of the self. For those who are dismissing, therefore, who have a lower motivation to understand the mental states of others due to their internal working model of positive self and negative other, the consequence will be lower RF scores. This could then account for the low RF found by Macbeth et al (2011) where their sample was dominated by this particular attachment category.

To conclude this section it can be summarised that lower RF scores are associated with psychopathology but this should not come as a surprise. The capacity to mentalize is borne within the context of early caregiver relationships and as already discussed, where an insecure attachment style develops so do the limitations on the individual's ability to mentalize. Insecure attachment styles have already been found to be over represented in clinical samples so one could argue that perhaps RF is a mechanism that reflects this association and is a measurable construct that can help us identify by what means an individual is vulnerable to the development of psychopathology. In addition, the higher RF scores recorded in 'normal' populations may indicate that it is a protective factor in the development of difficulties. Arguably being able to understand the mind of the self and others better helps a person integrate stressful or negative experiences. There is not a vast amount of literature exploring RF as a mediator in developmental psychopathology but the next section discusses this possibility.

2.5.1 RF as a mediator in the development of psychopathology

Fonagy and colleagues (1996) hypothesised that RF would mediate the relationship between trauma and BPD and indeed found this to be the case where those who had experienced abuse but had higher scores on the RF scale were less likely to have developed BPD. In comparison, 97% of the low RF group who had experienced abuse were diagnosed with BPD. This suggests that the ability to integrate and process these interpersonal experiences was a measure of resilience in these individuals compared to those who had lower RF scores and were more likely to go on to develop BPD. As another example of the possible protective mechanism of RF, a sample of children (mean age 9.4 years, range 5 ½ to 14 yrs) who had been removed from families into foster care due to parental methamphetamine abuse were examined in terms of mental health and behavioural outcomes (Ostler, Bahar & Jessee, 2010). Higher mentalizing skills were associated with fewer internalising and externalising problems, less depression, less aggression and higher levels of social competency. Importantly, higher levels of mentalization were also associated with better acknowledgement of feelings and symptomatology. Arguably it is this understanding of self representations, and through social competence the representation of others, that helps the child integrate their early negative life experience and provide protection from the development of emotional and behavioural difficulties.

Fossati et al. (2009) investigated deficits in mentalized affectivity, attachment and impulsive aggressiveness in a sample of 637 undergraduates (mean age 23.01 years, sd±2.97). The

authors found that insecure attachment was associated with levels of aggression and that poor mentalizing skills, specifically in identifying feelings in the self, were central to impulsive aggression. Further to this they found that this particular type of limited mentalization partially mediated the initial relationship between attachment and impulsive aggression.

Whilst this preliminary evidence needs replication, it is suggestive of higher mentalization skills facilitating greater levels of psychological adaptation, both in terms of emotions and interpersonal interactions, to negative of stressful life events. The evidence also highlights the negative effect of mentalization where it has demonstrated an association between poor mentalization skills and psychopathology suggesting RF to be a mechanism of vulnerability in the development of mental ill health.

2.6 Discussion of Part II

During Part II of this section it has been established that mentalization is fundamental to the successful development and organisation of the self. Optimum attachment experiences, whereby a secure attachment style is formed in the individual, facilitate the mentalization skills of the individual whereby they can understand the intentions of themselves and others through the assessment of internal representations. The ability to mentalize is crucial to the functioning and adaptation of an individual in terms of how they learn to regulate their emotions and conduct interpersonal interactions. As Fonagy, Gergely and Target (2007) point out,

'The ability to give subjective meaning to psychological experiences becomes possible as a result of our developing ability for explicit and reflective understanding that others' (as well as our own) actions are driven by underlying mental states and the establishment of adaptive mentalizing strategies to reason about interactive experiences in terms of such mental states.' (p.288)

As has been discussed, where early experiences foster an insecure attachment style in an individual it is hypothesised that their mentalizing skills will be limited. In evidence of this, empirical findings have shown lower RF scores to be consistently been associated with insecure attachment classification according to the AAI (Bouchard et al., 2008; Fonagy et al., 1996; Fonagy, Steele et al., 1995; Macbeth et al., 2011; Ward et al., 2001). Lower RF scores have also been associated with higher levels of psychopathology (Bouchard et al., 2008; Fonagy et al., 1996; Levinson & Fonagy, 2004).

Recent evidence has proposed mentalization to be a mediator in the relationship between insecure attachment and outcome (Fossati et al., 2009), trauma and BPD (Fonagy et al., 1996) and early life stressors and psychopathology (Ostler et al., 2010) where high RF skills are a protective factor in the subsequent development of disorder. Should it then be assumed that low RF is an indicator of a vulnerability within individuals that adversely affects their developmental trajectory? Further exploration of this is needed in terms of investigating how the facets of mentalization impede the developmental outcome and the ability to build successful interpersonal relationships of an individual. Mentalization research in adolescent psychopathology is limited so attempting to expand this area and understanding these processes within adolescence will be key considering this developmental period represents the start of abstract thinking where an individual learns to consider the mental states of themselves and others. Furthermore, it is a period where far more complex emotions and thoughts exist as the individual attempts individuation. If mentalizing skills have not developed or their capacity is limited, the individual is in a situation of extreme vulnerability whereby emotions and interpersonal interactions may threaten to overwhelm them. Understanding how and why mentalization can affect individual adaptation and their developmental trajectory is therefore of crucial importance in the investigation of adolescent psychopathology which is the focus of this study.

Part III – Emotion Regulation

A critical appraisal of the emotion regulation literature in clinical adolescent populations

3.0 Introduction – the concept of emotion regulation

Gross and Thompson (1999) proposed a multi modal model of emotions. They propose that emotions arise when an individual is in a situation pertinent to their goals, are a complex bodily phenomenon involving changes in behaviour, physiology and subjective experience and intrude on an individual's awareness. Consequently, investigating how an individual regulates these emotions is a hugely diverse challenge. Indeed, within the literature there is a marked disparity between how each author understands and conceptualises the construct of emotion regulation (Cole & Deater-Deckard, 2009; Thompson, Lewis & Calkin, 2008) and that definitions are often implied and not stated (Southam-Gerow & Kendall, 2002; Thompson, 1994). In an attempt to unite the literature, Gross and Thompson (2007) highlighted the diversity in emotion regulation and that it should be considered as a continuum of processes ranging from,

"…conscious, effortful, and controlled regulation to unconscious, effortless, and automatic regulation" (p.8)

However, rather than investing the construct as a whole, studies are often broken down into the cognitive, affective and behavioural components of emotion regulation and dysregulation for pragmatic reasoning (Amone-P'Olak, Garnefski & Kraaj, 2007). Indeed, traditional approaches investigating emotion regulation have had a strong cognitive behavioural focus where behaviour or cognitive efforts are utilised to control predominantly negative emotional experience (Gross, 1999).

The difficulties in defining the construct of emotion regulation will undoubtedly have precluded both a complete knowledge base of this area and the collection and integration of literature. In fact, in a recent meta-analysis of emotion regulation strategies in psychopathology across normative and clinical samples, studies were included where emotion regulation, although reported, was not the main focus and still only 114 were available for full analysis over a 23 year period (Aldao, Nolen-Hoeksema & Schweiser, 2010). A lack of definition suggests that the design and methodology of investigating emotion regulation becomes purely pragmatic in the eye of the researcher.

In recent years, however, emotion regulation has been described as processes where an individual experiences their emotions and as such, is aware of and modifies the impact of their emotions on their behaviour and subsequent interpersonal interactions (Gratz & Roemer, 2004; Zimmerman, 1999). In fact, there are numerous stages at which regulatory efforts are made by the individual to change their emotional situation (see figure 3.1).These efforts can be made in the appraisal, experience of and expression of emotions plus changes made by the individual to their internal and external world. These areas are targeted in attempts to regulate undesirable emotions and are terminated once this has been achieved (Gross & Thompson, 2007).

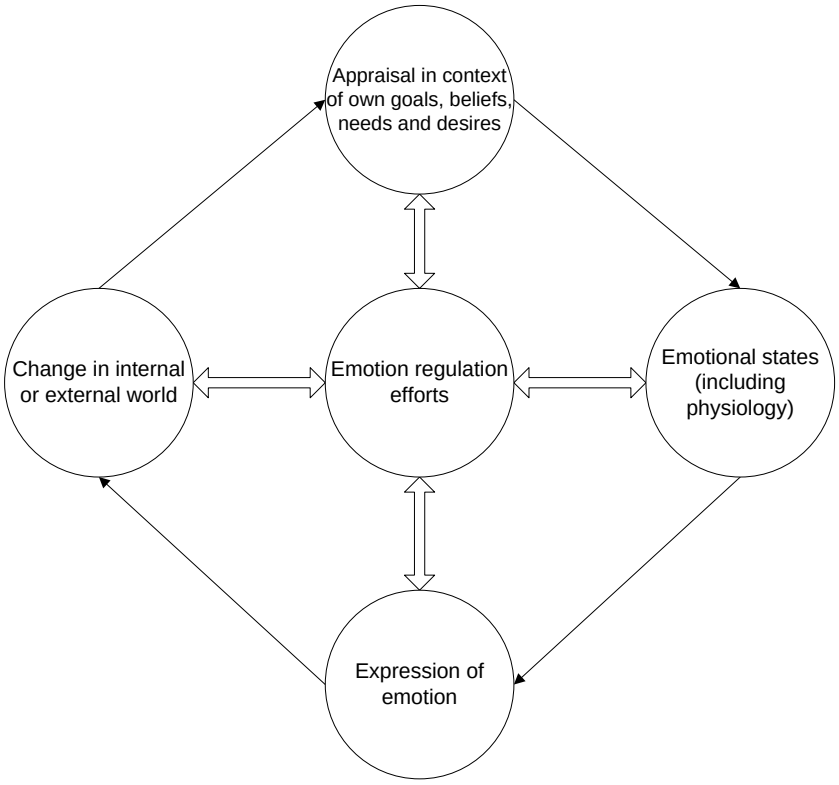

Figure 3.1 Diagram of the stages of emotion and the regulatory opportunities

3.1 Early caregiver experiences and the development of emotion regulation

The ability to regulate emotions using any of the aforementioned efforts is developed within the context of early caregiver interactions and was discussed in Part I. In brief, Bowlby (1969/1982, 1973, 1980) proposed that individuals learn to recognise, label and regulate their emotions within the relationship with their caregiver who by responding sensitively to their emotional states enables the individual to organise their emotions. This occurs within the context of secure attachment. Where non-optimal experiences occur, where an individual

develops an insecure state of mind with respect to attachment, they are unlikely to have had consistent or sensitive responses to their emotional states. Subsequently, these individuals are more likely to either over regulate their emotions in attempts to avoid possible emotional distress or under regulate them in an attempt to gain help from others to manage their emotional states. The proposition is that these strategies, in the face of developmental psychopathology, actually serve to exacerbate a difficult situation where maladaptive emotion regulation strategies are utilised more frequently by those with secure attachment compared to those with an insecure attachment who are more able to integrate their emotional experiences.

This review was carried out because, to the authors knowledge, emotion regulation within the context of attachment has not yet been examined in clinical adolescent populations. However, studies investigating emotion regulation and adolescent psychopathology have been carried out although the number of studies is small. It was felt that reviewing the current evidence base would provide a foundation to understand the current conceptualisation of emotion regulation in mental health populations which this author could incorporate into the formulation that emotion regulation is the mechanism which accounts for variation between attachment and adaptation in clinical adolescent populations.

3.2 Emotion regulation and psychopathology

Difficulties in emotion regulation, or 'emotion dysregulation' as the literature commonly refer to where interpersonal difficulties are evident (Cole, Michel & Teti, 1994), have long been associated with difficulties in mental health (Aldao, Nolen-Hoeksema & Schweiser, 2010; Cole & Deater-Deckard 2009; Cole, Michel & Teti, 1994; Gross & Munoz, 1995; Mullin & Hinshaw, 2007; Sheeber et al., 2009; Southam-Gerow & Kendall, 2002). It is surprising, therefore, that the majority of research in this area has been conducted in normative samples with clinical populations yet to be comprehensively examined (Alink, Cicchetti, Kim & Rogosch, 2009). In addition, the evidence of emotion regulation within psychopathology has been predominantly of association. To further current understanding Lewis, Zinberg and Durbin (2010) argue that causality needs to be demonstrated in order to assess the integrity of the relationship between emotion regulation and mental health especially as there are few longitudinal studies that can provide confirmatory analysis (Southam-Gerow & Kendall, 2002).

Adolescence is key developmental stage to focus on here because, in addition to usual life stressors, individuals have to negotiate greater variability in intra and interpersonal difficulties. As Fonagy, Gergely, Jurist, & Target (2004) discuss, an individual has to integrate not just their own, but the thoughts, feelings and drives of others on a day to day basis thus involving multiple emotions and as a result, multiple attempts to regulate them. In addition, Hunter et al., (2011) propose that the emotional and cognitive changes that occur in adolescence are the stage for adaptive or maladaptive beliefs about emotions. As adolescence is proposed to underlie a successful and pivotal transition to adulthood (Zimmerman & Cleary, 2006) the scarcity of literature investigating clinical adolescent populations is extraordinary (Scott Brown & Wright., 2003).

The rationale for this part of section 1 was, therefore, to explore the empirical evidence of emotion regulation in clinical adolescent populations and highlight the challenges and difficulties that lie within this area. It will also outline that there are many challenges to overcome before a consistent and empirically grounded research base can be established.

3.3 A critical appraisal of the emotion regulation literature in clinical adolescent populations

The importance of understanding psychopathology in adolescence cannot be underestimated so, in an attempt to enhance the evidence base, this work will summarise the emotion regulation research conducted with clinical adolescent populations. A relatively broad search criterion was used and the focus was on empirical clinical studies only. Discussion of emotion regulation will focus on and critique the conceptual and empirical processes used by the authors in the hope of highlighting future theoretical and methodological directions.

3.3.1 Methods

A systematic search of four databases was conducted; Ovid MEDLINE ® (1996 to May Week 4 2011), EMBASE (1996 to 2011 Week 15), PsychINFO (1987 to May Week 4 2011) and AMED (Allied and Complementary Medicine) (1985 to May 2011). The keywords used within the search were 1) “adoles$” or “young people” or “young person$” or “teenage” or “youth” 2) “affect” or “emotion$” or “regulation” or “alexithym$” and 3) “psychopathology” or “mental health”. This yielded 1526 papers and the following inclusion and exclusion criteria were applied. Inclusion criteria were: adolescent samples, clinical population and mental health difficulties. Exclusion criteria were: non mental health populations, populations with learning disabilities, samples of children (up to 12 years of age), adults (from 18 years on), population samples (from 16 years and above where no

distinction was made for age group), theoretical papers without a sample, papers without an English translation available and studies not published in peer reviewed publications.

This led to 70 papers deemed suitable for inclusion. After further examination of abstracts and full articles a further 25 did not meet inclusion criteria leaving 45 papers. The references of these papers were examined which led to the identification of an additional 16 papers leaving a total of 61 papers meeting inclusion criteria.

3.3.2 Results

The majority of adult emotion regulation literature investigates the processes and strategies an individual uses to try and regulate their emotions (Gross & Thompson, 2009) and this was evident within research investigating clinical adolescent populations. Almost all studies focus on emotion dysregulation and the maladaptive strategies used by individuals and are analysed within a functional context (i.e. the outcome for these individuals or illness severity). The authors fall into three groups; those that investigate dysfunctional behaviour as an expression of emotion, those that investigate the cognitive processes associated with emotion regulation and those that look at emotional suppression as a strategy. The evidence found for each of these groups will be discussed below.

3.3.2.1 Dysfunctional behaviour as an emotion regulation strategy

Although the literature on emotion regulation within clinical adolescent populations is sparse the main body of work is on maladaptive behaviour as a form of emotion regulation. One group of behaviours hypothesised to regulate negative affect is self harm where it functions to release tension and depression (Nixon, Cloutier & Aggarwal, 2002; Ohmman et al. 2008), alter negative emotional states (Sim et al. 2009) and work as a form of emotional expression (Suyemoto & Macdonald., 1995). Of note, throughout the literature self harm has been used as an umbrella term to cover self injurious behaviour, non suicidal self injury or self mutilative behaviour (SMB).

Nock and Prinstein (2005) developed a four factor model for SMB utilising a functional approach examining antecedent contextual influences on self harm. The model was made from four factors; positive and negative reinforcement, where the individual focuses on themselves and their internal state, and positive and negative social reinforcement, where the individual focuses on others. The authors proposed that engaging in SMB for automatic reinforcement can be either positive, in an effort to create a desirable physiological state or

lessen one. In a similar way, positive social reinforcement was proposed to be an attempt to create a reaction from others whereas negative social reinforcement was proposed to reduce social interaction and escape from interpersonal demands. When applied to their sample (n=108) of adolescents consecutively admitted to hospital, the negative automatic reinforcement factor was the most frequently endorsed reason for SMB, functioning as a mechanism to avoid their internal emotional states. In fact, almost double the sample endorsed automatic reinforcement compared to social reinforcement (24%-53% compared to 6%-24% respectively) suggesting these adolescents focused more on their internal states than using other people to regulate their emotions. Yet before it can be concluded that engaging in SMB is to regulate negative affect within oneself some methodological issues need to be discussed.

Nock and Prinstein (2005) sample description is reported by descriptive statistics only preventing a comprehensive analysis of methods. No details were provided about the reason for the adolescents' admittance to hospital leaving the reader unable to ascertain if SMB is a significant difficulty for the individual or a result of other, ongoing, mental health difficulties. Moreover, the authors reported the mean number of SMB incidents was 80 (sd±132.2) in the previous 12 months per person but this, arguably, was not representative of the evident skew in the data where the range of SMB incidents was 1 – 745, the median 19 and the mode was 2. Although distribution was not noted, arguably this mean could represent an inflation of SMB reported by individuals. For the development of their model Nock and Prinstein (2004) used confirmatory factor analysis where the authors acknowledged their small sample size and subsequently used goodness of fit indices which are less biased by sample size. However, the comparative fit index (CFI) was 0.90 which does not indicate a particularly good fit of the data to the model, particularly when the chi square was significant at 0.02[7]. These difficulties could be attributable to the high correlation between the four factors (r= 0.39 to 0.78) suggesting an overlap between the constructs of automatic and social reinforcement. These results should therefore be considered carefully.

Self harm and suicide have common associations. Although the former is not always a precursor to the latter, it is certainly worth investigating any differences between the groups in the hope of identifying pertinent risk factors of suicide (Brausch & Gutierrez, 2010). Comparing adolescent suicide attempters to those with suicide ideation, Zlotnick,

[7] In recent work by Hu and Bentler (1999) a CFI of greater than or equal to 0.95 is now the accepted level of fit for a model where chi square must also be *non significant.*

Donaldson, Spirito and Pearlstein (1997) found that the attempters exhibited a greater number of SMB and higher levels of emotion dysregulation (effect size 0.71 and 0.68 respectively) in comparison to suicide ideators. Similarly, Esposito, Spirito, Boergers and Donaldson (2003) find more frequent major self mutilation, anger and affect dysregulation in adolescents with multiple suicide attempts compared to those with a single attempt. Even in comparison to their adult counterparts, adolescent suicide attempters have been found to have significantly higher behavioural dysfunction including more frequent self injury, number of self injury types and more expressed anger (Zlotnick, Wolfsdorf, Johnson & Spirito, 2003). These findings demonstrate high levels of distress and emotion dysregulation in suicidal adolescents where maladaptive behaviour is employed to reduce negative affect. When this ultimately fails, it is associated with resulting suicide attempts.

In keeping with the proposal that maladaptive emotion regulation strategies are expressed though maladaptive behaviour, other clinical difficulties have been examined. In the study by Zlotnick et al., (1997) it was helpful to have discharge diagnoses of suicidal adolescents within which to consider SMB and its possible co morbidity with other difficulties. Mood disorders were prevalent, with approx 51% of adolescents admitted classified as such. In fact, higher levels of mood disorders have also been found in multiple suicide attempters (Esposito et al., 2003). This would suggest behavioural emotion regulation may play some, as yet unexplained, part in the underlying mechanisms of mood disorders represented by the employment of dysfunctional strategies of self harm or suicidal behaviours to reduce distress. Indeed, dysregulation strategies were found in a bipolar disorder sample of adolescents (Goldstein, Miklowitz & Mullen, 2006). Despite this clinical group having the same reported social knowledge as healthy controls, the authors found that they exhibited significantly higher levels of inappropriate assertive or impulsive behaviours. Furthermore, Pencer and Addington (2008) found that the dysfunctional strategy of substance misuse predicted levels of negative effect and problem severity in adolescents with a first episode psychosis.

Furthermore, Adrian et al, (2009) found that behavioural difficulties in response to experiencing negative emotions differentiated their sample of adolescents consecutively admitted to a psychiatry unit over 12 months. Poor impulse control was associated with both internalizing and externalizing difficulties. Of note, those who experienced solely internalizing difficulties had limited understanding, acceptance and management of their emotions in comparison to those with solely externalizing difficulties. These authors also

considered these psychiatric difficulties within a social context and found that relational victimization (e.g. exclusion from peer group), was associated with both the internalizing and externalizing groups. There were some limitations to the study. The data was correlational so the question of whether emotion dysregulation occurs prior to the onset of emotional difficulties or after such events remains unanswered. Evidence was also gathered using self report measures to retrospectively assess emotion regulation. Considering the sample was of recently hospitalised adolescents it may well represent a superficially high level of emotional intensity and expression. An outpatient psychiatric control group would have provided invaluable comparable information to ascertain the generalisability of these results within a clinical sample. As a strength, however, the authors did not classify individuals into specific clinical difficulties. They used thorough chart analysis and discharge summary to group individuals based on their overall levels of difficulty and made four categories; internalizing, externalizing, dual or no difficulties. This allowed for overarching conclusions to be drawn across mental health difficulties and permits analysis of psychopathology as an overall construct in which emotion dysregulation was found to play a role.

Self harm and suicide have also been associated with difficulties in social contexts. When facing interpersonal difficulties, suicidal adolescents have been found to employ social withdrawal as a behavioural strategy in the face of interpersonal difficulties in attempts to regulate their emotions (Spirito, Overholser and Stark., 1989). Invalidating family environments have been directly linked to deliberate self harm in females, where self harm was described as a behavioural function to alleviate negative emotions (Sim et al., 2009). This relationship was also partially mediated by a lack of awareness and expression of emotions. On a protective note, however, Adrian et al, (2009) found family cohesion to be predictive of higher levels of adaptive emotion regulation. These behaviours suggest that social relationships influence the emotion regulation strategies employed by an individual and can predict both good and bad adaptation in clinical adolescent populations.

Of methodological concern in this section discussing dysfunctional behaviour as a maladaptive emotion regulation strategy there is no information on any treatment received either prior to or during admission in any of these studies. This is key information to omit as therapeutic work could confound results particularly if therapy is targeted at acknowledging and reducing difficult or painful emotional states. In addition, only two studies, those conducted by Zlotnick, Donaldson et al., 1997 and Zlotnick, Wolfsdorf et al., (2003) used a

common measurement tool, the regulation of affect and impulses subscale from the Structured Interview for Measurement of Complex PTSD (SICP; Pelcovitz et al. 1997) highlighting the necessity to develop a well validated emotion regulation measure within clinical adolescent populations.

Within this section there is evidence that dysfunctional behaviour is utilised as a maladaptive emotion regulation strategy in response to high levels of distress and interpersonal difficulties. Arguably, the individuals themselves consider these strategies as adaptive as in terms of regulatory efforts because they reduce negative emotional states.

3.3.2.2 Cognitive processes as an emotion regulation strategy

Cognitive emotion regulation can be understood as the conscious cognitive act of processing emotionally arousing information (Thompson, 1991; Garnefski, Kraaj & Spinhoven. 2002) although how this style of regulation becomes maladaptive has yet to receive extensive examination. When flexible thought processes allow for the integration of negative emotions it is considered adaptive emotion regulation. When cognitions exacerbate distress and are subsequently associated with psychopathology, they are considered to be maladaptive emotion regulation processes. Numerous styles of maladaptive cognitive emotion regulation strategies have been identified for example, rumination, self blame and denial to name some examples (Garnefski et al, 2002). Also considered maladaptive is the cognitive act of thought suppression which been associated with frequency of self harm in efforts regulate emotions and reduce unpleasant emotions (Najmi, Wegner & Nock, 2007). In this literature, however, the principal style of cognitive processing investigated in clinical adolescent samples was the association between maladaptive appraisal of emotions and psychopathology.

Investigating the relationships between interpersonal trauma, cognitive distortions and non-suicidal self injury (NSSI) in adolescent psychiatric inpatients, Weismoore and Esposito-Smythers (2010) examined incidents of physical and sexual abuse by a caretaker, physical and sexual assault not by a caretaker and cognitive errors. These errors were classified as overgeneralization, catastrophizing, personalizing and selective abstraction. Whilst neither abuse nor assault was predictive of NSSI, cognitive distortions and a negative view of self *were* significantly associated with NSSI. Of note, when these factors were added to the non significant model of NSSI being predicted by assault, the model became significant suggesting that cognitive distortions and a negative view of the self mediate the relationship between assault and NSSI. In addition to these findings, the authors also found that an

increased frequency in distorted cognitive appraisal led to a higher propensity to use maladaptive regulation strategies. Formulating NSSI as a coping mechanism, whilst it does not facilitate adaptive functioning, it does help an individual reduce overwhelming emotional states into something that is felt to be manageable.

In a study that compared clinical and control groups, Orbach et al., (2007) investigated the susceptibility to threat appraisal of three groups of adolescents; a non clinical control group, a group of suicidal in patients and a group of non suicidal inpatients. The authors found the two clinical groups perceived a problem solving task as more threatening than the control group. The hyper sensitivity to threat, in addition to higher hopelessness scores and a limited ability to generate solutions for the task were simultaneous predictors of suicidality. Interestingly, however, the significant effect of threat appraisal associated with suicidality ($\beta=0.46$ $p<0.01$) became non significant ($\beta=0.07$, $p>0.05$) when controlling for hopelessness, an unsurprising result when accounting for the fact that hopelessness explained 41.3% of the variance in threat appraisal scores. Perhaps a misperception of threat moderates the development of psychopathology and it is, in fact, the appraisal of hopelessness that is more significant in relation to mental health difficulties. Indeed, the authors found that those who demonstrated higher threat appraisals were also those who had a low expectancy of their ability to manage or regulate their low mood. Furthermore, Carthy, Horesh, Apter and Gross (2010) found clinically anxious children (mean age 13.42 years) who experienced higher levels of threat appraisal than non anxious children (mean age 13.74 years) were less able to employ strategies of spontaneous or cued reappraisal. This finding perhaps reflects rigidity to the cognitive processing in clinical adolescent populations thus making them more sensitive to perceived threat and acts as mechanism of vulnerability when considering developmental psychopathology.

Both of these studies highlight a central difficulty in assessing cognitive appraisal as both experiments were conducted in laboratory settings. This staged environment would not be reflective of an individual's environment. In the external world there is more exposure to ongoing challenges and perceived threat and that these experiences will be hugely diverse occurring in varied interpersonal, social and environmental domains. A further caveat to the research is that whilst Carthy et al. (2010) provided exclusion criteria of anti anxiety psychological and pharmacological treatment Orbach et al. (2007) did not provide information on potentially confounding variables of treatment being received by inpatients, their length of stay, indicative of illness severity, at the time of recruitment to the study.

The importance of investigating cognitive strategies of emotion regulation in naturalistic settings and looking at both the positive and negative effects was demonstrated by Amone-P'Olack et al., (2007). The authors investigated strategies employed by adolescents who had been abducted in Uganda in relation to post traumatic symptoms. Although this was not a formerly diagnosed clinical sample, the authors used a post traumatic symptom scale designed to parallel the DSM-IV criteria for PTSD (The Impact of Events Scale – Revised (IES – R); Weiss, & Marmar, 1997) and found 98% of their sample had clinically significant symptoms. Whilst this was a very specific study with limited genrealisability, the authors did find significant results in terms of cognitive appraisal. Denial was a significant predictor of internalising and externalising behavioural difficulties plus post traumatic symptoms. In contrast, planning and putting the situation into perspective were appraisals found to serve a protective function which were inversely related to post traumatic symptoms and problematic internalising behaviours. Of methodological note, however, low cronbach alpha scores in the sample led to the exclusion of four of ten cognitive emotion regulation subscales where reliability was less than 0.60. The questionnaires used (Cognitive emotion regulation questionnaire, CERQ; Garnefski et al., 2002; COPE; (denial subscale only) Carver, Scheier & Weintraub, 1989) had previously reported alpha's ranging between 0.68 to 0.83 (CERQ subscales) and 0.71 (COPE; denial subscale). This lack of internal validity within the scales found by Amone-P'Olack and colleagues (2007) had, however, also previously been found in an adolescent sample by Garnefski and Kraaj (2006) suggesting that these measures are perhaps unsuitable for clinical adolescent populations.

Concluding this section, there is an evident association between maladaptive cognitive appraisals and developmental psychopathology but further work is needed to substantiate the evidence so far. Cognitive errors and sensitivity to threat appraisal appear to be two particular strategies increasing an individual's vulnerability to poor adaptation in the context of mental health difficulties and are areas for future consideration.

3.3.2.3 Emotion suppression as an emotion regulation strategy

The final category of emotion dysregulation found in the clinical adolescent literature is one concerning the labelling, accepting and expressing the emotions themselves. Difficulties in emotional language have been observed in adolescents with somataform disorder compared to healthy controls (Burba et al. 2006), self mutilation in adolescent girls (Lambert and de Man, 2007) and in individuals traumatised before the age of fourteen (van der Kolk et al. 2005) but causality has not been determined (Taylor, 2000). This area of the literature

differentiates two components of emotional dysregulation; one focusing on the inability of the individual to access their emotional states and thus not understand them, and the other on efforts made by an individual to suppress the impact of their emotions on their thoughts, feelings and behaviours.

Mechanisms that may inhibit an individual's understanding of their emotions have been found by O'Kearney and Dadds (2005). The authors noted emotional language deficits, less use of emotional terms and difficulties explaining them, in a clinical population of adolescents with internalising and externalising disorders. In addition, Lambert & de Man (2007) found female adolescents who engaged in self mutilation experienced particular difficulties in identifying their emotions and differentiating them from their physiological states. Van Rijn et al., (2011) investigated the affective dysfunction of adolescents at risk for psychosis and found that in comparison to controls, this group demonstrated difficulties in identifying and verbalizing their emotional states. The authors also found that this was subsequently associated with impairments in social functioning. Arguably these are both areas which could be a clinical focus as markers of vulnerability within the developmental trajectory of these adolescents.

Parallel findings have also been uncovered in anxious youths where they were significantly less able to understand their changing feelings or hide their emotions compared to controls (Southam-Gerow & Kendall, 2000). Also demonstrating an inability to regulate their expression of emotion are adolescents exhibiting suicidal behaviour who have reported significantly high levels of anger in terms of both intensity and frequency (Lehnert, Overholser & Spirito, 1994). Further evidence of adolescents with mental health difficulties not being able to regulate their emotional expression was found in a study by Sheeber et al (2009) who examined the intensity and duration of affective experiences in a sample of clinically depressed adolescents comparing them to demographically matched controls. The authors found those with depression experienced increased intensity of anger and sadness and a longer duration of anger. These results should be considered carefully, however, because they are based on the adaptation of semi-structured interviews where correlation between coders was r= 0.58 but ranged from 0.23 to 0.85. Such a large range indicates poor internal validity for the study measure and makes genrealisability difficult

Zonnevylle-Bender, Van Goozen, Cohen-Kettenis, van Elberg and van Engeland (2002; 2004) conducted two studies in 2002 and 2004 with female adolescents with eating disorders

in attempts to assess the ability of the individual to consider their emotional states when experiencing a mental health difficulty. The first study in 2002 reported the anorexic group scored higher on being unable to access their emotional state and significantly worse in labelling emotions than the control group, particularly when asked to free associate. In their second study, Zonnevylle- Bender and colleagues (2004) compared two female clinical groups with anorexia or internalizing difficulties to age matched controls and found slower processing and labelling of emotions within both the clinical groups. Furthermore, Zonnevylle-Bender et al. (2005) found that an adolescent eating disordered population demonstrated significant discrepancies between their reported emotional state and what their physiological state indicated where the participants reported more feelings of tension and depression than their physiological responses signified. There are two possible explanations for this, either the individual is reporting what they perceive to be the expected response from them or they have difficulty assigning an emotional label to the physical feelings they are experiencing, suggestive of inherent emotion labelling difficulties. For either of these hypotheses, the concealment of emotional states to either self or other is a key area for further research as repression of emotions have also been found in suicidal in patients (Apter et al, 1997) and can therefore be formulated to play a significant role in poor adaptation in adolescents with clinical difficulties.

Difficulties in identifying and understanding emotions have been associated with developmental psychopathology. Understanding emotions is a prerequisite for an individual to be able to regulate their emotions and where this is lacking, it has been found that an individual demonstrates impaired social functioning (van Rijn et al., 2011) and poor adaptation (Lambert & de Man, 2007). Studies attempting to delineate this concept would greatly enhance the current understanding of emotion dysregulation in adolescence.

3.3.3 Review discussion

Deficits in emotional language are common throughout psychopathology and the evidence for clinical adolescent populations in this review suggests the same. There are, however, a number of challenges throughout this literature that make interpretation of results difficult and are discussed below.

3.3.3.1 Lack of concept

The lack of a unified construct of emotion regulation is highlighted within clinical adolescent populations. Not only do authors not state nor share their understanding of the definition of emotion regulation, focus is often only on one specific form of emotion dysregulation. In addition, it was evident in this review that emotion regulation was not the key concept being investigated by the majority of papers, rather it was recognised as a influential factor during secondary analysis (e.g. Apter et al., 2007; Brausch et al., 2010). This lack of clarity and focus is not surprising given the complex nature of emotion regulation (Zeman, Cassano, Perry – Parrish & Stegall., 2007) with authors increasingly calling for a clearer definition of the construct (Lewis et al., 2010). This should be developed sooner rather than later especially as Compas (2009) highlights,

"...the translation and application of scientific findings suffer when theory and research are divided by artificial boundaries between discipline and topical area." (p.89)

3.3.3.2 Functional approach

This review also found that all studies included measured emotion regulation by functional or behavioural outcome such as the difference between suicide ideators and suicide attempter (e.g. Zlotnick et al, 1997) or the outcome of anorexia nervosa (e.g. Rastam et al., 2003). The practice of linking emotion dysregulation to specific symptomatology is a categorical, and although pragmatic, approach, it does not address the underlying issue that emotion dysregulation is evident across all forms of psychopathology (Cole & Deater-Deckard, 2009). By focusing on one particular area of outcome authors are neither considering the mechanisms of how emotion regulation develops or functions within individuals nor how it transcends diagnostic categories to be an underlying mechanism in the context of both mental health well being or difficulties. This functional approach also misses the developmental and social contexts within which emotion regulation takes place. Considering in day to day life an individual interacts with a number of family members, friends or acquaintances, all of whom can cause an emotional reaction within that individual, it is curious that only a handful of papers in this review considered emotion regulation within interpersonal relationships (e.g. Adrian et al., 2009; Nock & Prinstein, 2005; Schulz et al., 2005; Sim et al., 2009) because even those people with extremely limited social networks still have to manage interpersonal interactions. Indeed, as Thompson et al. (2008) propose, emotion regulation should be considered a systemic process and therefore emotion regulation literature should examine and include the impact of interpersonal relationships.

3.3.3.3 Methodological concerns

A number of methodological issues became apparent in this review of clinical adolescent populations. Firstly, in terms of reported recruitment in this review, very little information was provided about methods used to identify suitable participants, where they were recruited from and how they were recruited. Participant response rate or drop out rates was also very rarely supplied. Both of these factors makes it difficult to replicate the studies and generalise the results. Small sample sizes were also common in this review with little discussion as to why this was the case. This may reflect inherent difficulties in recruitment or engagement within clinical adolescent populations or difficulties accessing suitable services.

The well documented lack of instrument for emotion regulation in adolescence (Schuppert et al., 2010; Weinberg & Klonsky, 2009; Zeman, Klimes-Dougan, Cassano & Adrian, 2007) was mirrored in this review where there was little homogeneity to the research measures used across the studies. Moreover, the majority of measures used were self report questionnaires that bring their own limitations. In order to complete a self report measure on emotion and emotion regulation there is a presumption that the individual can understand and recognise the emotions they are being asked about as well as being able to recall and accurately describe this information (Aldo et al., 2010; Lewis et al., 2010; Messer & Fremouw, 2008). What is apparent in this review, however, is that adolescents experiencing psychopathology have difficulties accessing their emotional states resulting in probable inaccurate representations of their internal states. Of course this could still remain a difficulty when using other methods (e.g. semi structured interviews or any free narratives used in analysis).

Many studies adapted affect regulation subscales, without psychometric validation, from other measures in efforts to assess regulation (Esposito et al., 2003; Nixon et al., 2002; Zlotnick et al., 1997) as well as some studies utilising measures without external validation e.g. Nixon et (2002). By adopting these inconsistent measurement methods, the internal validity of studies is compromised (Vasilev, Beauchaine, Mead & Gatzke-Kopp, 2009). Without true validation of adjusted measures the conclusions that can be drawn from the research literature are limited. Indeed, the varying methods across all studies certainly question the generalisability of the results and also make replication near impossible.

Finally, a number of studies were conducted within laboratory settings (e.g. Ladouceur et al., 2005; O'Kearner et al., 2005; Orbach et al., 2007; Rich et al., 2007) designed to challenge an individual into utilising their emotion regulation skills. Whilst this work has been valuable,

conducting research in naturalistic settings would further enhance our understanding of emotion regulation strategies in clinical adolescent populations.

3.3.4 Review conclusions

Although there are a number of challenges evident when attempting to investigate psychopathology within adolescent populations, there are ways to overcome them. For example the development of a vigorously validated emotion regulation measure for adolescents with mental health difficulties would make the construct easier to measure and generalise results across studies. Investigating larger groups of adolescents with mental health difficulties for more robust statistical analysis would also provide a much needed and improved evidence base. Different levels of analysis and mixed method design could also help delineate the construct of emotion regulation and any relationship with psychopathology (Weems & Pina, 2010). This would facilitate a move beyond correlations and associations to start investigating causal relationships and further our understanding of whether maladaptive emotion regulation strategies cause major social and emotional disruption increasing an individual's vulnerability to developing mental health difficulties. On the other hand, further investigation could also address if maladaptive strategies worsen as a consequence of mental illness and cause disruption in developmental trajectory of an adolescent. There is an obvious need to generate more empirical evidence looking at emotion regulation and mental health to determine associations and causality pathways. Longitudinal research is also of paramount importance in the ongoing work in piecing together this complex multi faceted construct (Lewis et al., 2010).

3.4 Future work and implications for thesis

This thesis aims to carefully analyse the construct of emotion regulation within an adolescent severe and enduring mental health sample in the context of psychological adaptation and outcome. Focus will be on extending the current literature by examining both internal and external functional and dysfunctional emotion regulation.

As a final point, the author notes the lack of developmental framework proposed by any of these studies in which to explain the mechanisms of emotion regulation. As Kring and Bachorowski (1999) highlighted when theorising about developmental psychopathology,

'…surprisingly little empirical evidence research has systematically examined the manner in which disturbed components of emotional processes interfere with adaptive behaviour in these disorders.' (p.592)

This thesis proposes that attachment experiences provide the foundation from which both successful, adaptive emotion regulation strategies and unsuccessful, maladaptive strategies develop (see Part I). Therefore, the examination of adaptation in mental health difficulties will focus on emotion regulation within this developmental framework.

Part IV Social Support

Further exploration

4.0 Introduction

Understanding social relationships and the support they provide to an individual is key to understanding adaptation and outcome within mental health. Adolescence is a developmental period that is vulnerable to the development of psychiatric disorders where deficits in psychosocial functioning play a key role in many disorders (American Psychiatric Association, 2000; Gowers et al., 1999) and social support has been associated with psychopathology in adolescence (Bergeron et al., 2007, Cohen, 2000; Falci & McNeely, 2009; Parker & Asher, 1987; Sroufe, Duggal, Weinfield & Carlson, 2000; Ystgaard, Tambs & Dalgard, 1999). However, relatively little research has focused on *how* social support is involved in the development, maintenance of, and recovery from mental health difficulties. This is particularly the case for research into adolescence in comparison to that of adult literature (del Valle, Bravo & López, 2010). This lack of research could partially be due to the continuing acceptance that social support is an ill defined concept that needs specific clarification when being discussed (Barrera, 1986; Brugha, 1995; Cohen & Wills 1985; Smith & Anderson 2000) and whilst appearing to be a simplistic idea, it should, in fact be considered a truly heterogeneous concept. In attempting to demarcate the construct of social support, therefore, and in agreement with the proposal from Champion (1995), this thesis proposes that there are two components integral to social support that need exploration; the inner resources of the individual and the external social environment.

Beginning with inner resources, this component is about the ability of the individual to organise their sense of self and other and to understand themselves and others as intentional beings with differentiating mental states. To recap, discussion in Part I highlighted the particular importance of attachment in the organisation of the self, where internal working models guide positive and/ or negative beliefs about the self and others which subsequently impact on an individual's ability to seek out, utilise and maintain social support (Collins & Feeney, 2000; 2004; Hazan & Shaver, 1987; Kobak & Sceery, 1988; Main, Kaplan & Cassidy, 1985). Furthermore, the ability of the individual to mentalize will also substantially impact on their efficacy within relationships. Whilst, to the author's knowledge, there is no empirical work investigating mentalization and social support within clinical adolescent populations, it could be expected that individuals without the ability to understand the mental

states of themselves and others would be compromised in their ability to form sustaining social relationships. Indeed, a lack of understanding in the beliefs, drives, emotions and behaviours of self and other would leave an individual vulnerable to misinterpret social information, cues and interactions leading to difficulties in interpersonal relationships.

In addition to the formulation of attachment and mentalization predicting an individual's perception and use of social support, there is also the possibility of social support affecting the relationship of attachment and mentalization with respect to an individual's adaptation to mental health difficulties. Indeed, there is evidence that some forms of social support, such as peer relationships (Bosquet & Egeland, 2006) and social competence (Cooper et al., 1998) which have been found to mediate the effects of attachment on psychological adaptation. Consequently, understanding the reason why an individual has a lack of successful social relationships is crucial in determining how and why these patterns persist (Champion, 1995). To do this, however, the second component of social support needs to be considered; the external social environment of the individual which will form the main discussion within this section. This component relates to the availability of support available to the individual within their environment. This covers the source of support, how much support can be found and the quality of the support provided (Brugha, 1995; Champion, 1995; Pernice-Duca , 2008). These three factors combine to aid an individual in their navigation of the social environment and need further investigation.

4.1 Source of support

Hinde (1979) proposed that personal relationships develop through multiple and continuous social interactions over time and have behavioural, emotional and cognitive features and consequences. These relationships can take numerous forms and exist when interactions are shared between at least two individuals (Bretherton, 1992) with diverse groups of individuals potentially able to provide social support (Ystgaard, Tambs & Dalgard, 1999). Central sources of support are considered to be family, peers, partners, teachers and colleagues who all provide varying levels of support as an individual make transitions throughout life. These relationships have been found to impact on mental well being and risk behaviours in adolescents (Walsh, Harel-Fisch & Fogel-Grinvald 2010). In addition, the type of support each offer can vary across the provider (del Valle et al., 2010). In fact, mental health users have reported social relationships to be both supportive and harmful (Green, Hayes, Dickinson, Whittaker & Gilheany, 2002). It has been found, however, that those who receive

social support are in better health than those who do not (Broadhead et al., 1983; Cohen & Wills, 1985).

In terms of identifying sources of support in adolescence, Newcomb and Benter (1988) conducted an 8 year follow up study investigating adolescent transition to adulthood. The sample included 654 adolescents and using structural equation modelling, the authors found that social support significantly predicted levels of difficulty and emotional distress in adulthood. Based on good relationships with parents, family, other adults and peers, social support was found to decrease problems with drugs, family, psychosomatic complaints, work, health, relationship difficulties and emotional distress in young adulthood. Also perceived social support from family, friends and teachers is associated with higher self esteem in adolescence (Greenberg, Siegel & Leitch, 1983; Ikiz & Savi Cakar, 2010; Veselska, Geckova, Gajdosova, Orosova, van Dijk & Reijneveld, 2010; Weber, Puskar & Ren 2010).

Gavazzi (1994) investigated perceived support in adolescence and found that family and peer support can interact and that this should be an important consideration in future work. For example, it has been proposed that one could compensate for deficits in the other i.e. peer relationships 'buffering' the experience of negative parenting in adolescents with behavioural difficulties (Landsford et al., 2003). To address the question of the importance of peer versus family support, del Valle and colleagues (2010) assessed how each developed as a source of support during adolescence. Their results were noteworthy, where they found that a significant decrease in the perceived emotional support received from parents corresponded to a significant increase in perceived emotional support from peers. These results replicated similar patterns found in other studies where peer support has increased over this developmental period (e.g. Cheng & Chan, 2004; Garnefski & Diekstra, 1996; Klineberg et al., 2006). Of note, del Valle et al, (2010) found that instrumental support did not change so rather than the parent not providing practical help, the adolescents perceived their parents to be emotionally distant which led to lower perceptions of support. These findings, demonstrating the importance of peer relationships in providing social support, warrant further consideration because adolescents have expressed a preference for help seeking to friends when experiencing mental health difficulties (Kelly et al., 2006; Wright et al., 2005) and experience lower levels of distress when utilising support from an immediate circle of friends (Fagg et al., 2008).

4.1.1 Peer relationships

Individuation is a key developmental process to focus on when considering adolescence and social support. It is a normal and necessary stage whereby the individual establishes themselves independently of their caregivers and is a process considered essential for normal development (Blos, 1967). Separating the self from others, however, increases an individual's developmental vulnerability due to a reorganisation of the self and a substantial jump in maturation. Peer relationships subsequently become even more important during this stage (Levendosky et al., 2001) and although many will be temporary and exploratory, many will last and become permanent sources of influence. As more weight is placed on social qualities, adolescents begin to value the positive opinions of others which are key in the development of self concept and self esteem (Ikiz & Savi Cakar, 2010). In addition, peers become the providers and recipients of social, emotional and practical support that can facilitate reflection within adolescence (Chen, Cohen, Johnson & Kasem, 2009; Schofield & Beek, 2006) and these relationships are hypothesised to help an individual negotiate a successful transition to early, middle and late adulthood.

Examining the protective nature of peer relationships, Levendosky, Huth-Bocks and Semel (2002) examined negative life events of family violence and child abuse in relation to mental health functioning in adolescents. They incorporated an additional step examining the proposed mediator variable of perceived social support from peers. The authors examined a community population of 111 adolescents (mean age 14.86 sd±0.84) and found that whilst domestic violence and child abuse predicted 47% of the variance in adolescent depression, social support moderated this outcome. Higher social support levels were associated with higher satisfaction with best friend relationships across individuals who had experienced both low and high levels of domestic violence or child abuse. Higher satisfaction then moderated the impact of depression in the individual. These results highlight the potentially protective nature of close friendship support when adverse life events have been experienced. As further evidence Rigby (2000) investigated the effect of social support on 845 non clinical adolescent's well being. The authors found overall support from peers was significantly correlated to higher levels of well being for both sexes ($r=0.18$, $p>0.01$ males; $r=0.35$, $p>0.001$ females) and highlighted that for girls, relationships with best friends and classmates were associated with more perceived social support. These results should be considered carefully, however, as the author utilised a non validated social support measure that demonstrated low internal validity.

The damaging nature of poor peer relationships has also been demonstrated in the literatre. Perceptions of peer rejection during childhood has been significantly related to subsequent mental health problems in young adulthood (Roff, 1990), peer victimization in adolescence has been linked to maladaptive development (Hawker & Boulton, 2000) and also functions as a source of continuing stress for its victims. Stadler, Feifel, Rohrmann, Vermeiren and Poustka (2010) investigated mental health difficulties within the context of peer victimisation proposing that social support could act as a buffer. The authors found that peer victimisation was significantly associated with mental health difficulties ($\beta=0.08, p<0.05$) in their sample of 986 adolescents (mean age 14.68, sd±1.64) and confirmed their hypothesis finding that social support significantly reduced the negative effect of peer victimisation ($\beta=-0.27$, $p<0.01$).

Parker and Asher (1987) found that rejection rather than neglect in adolescent peer relationships caused later adult dysfunction on terms of criminality and psychological health. From the results, the authors noted a similar type of error, false positives, throughout their data. More children were classified as at risk of developmental dysfunction yet did not go on to develop any difficulties. This could have been due to methodological design where the authors investigated a number of studies and combined individual, peer and teacher rated assessments of social support. They also investigated school, clinical and high risk populations and combined their conclusions across all three groups. Nevertheless, the study highlights the need to investigate previous rejection in relationships and how it affects individuals in their current relationships and daily functioning.

Proposing that peer relationships play an integral role in psychosocial development, Chen et al. (2009) conducted a study investigating peer relationships and the psychiatric status of two hundred 17 year old adolescents and followed them up at age 29 conducting narrative interviews of their transition to adulthood. From these two age points the authors measured the amount of peer contact and peer conflict each individual had and the type of disorder if they had a psychiatric illness. The scale of contact was measured on a 0-99 range where 0 indicated contact with peers of no more than twice a year (in any form e,g. email, telephone, face to face), 50 indicated twice weekly contact and 99 indicated daily contact with peers. The authors devised a similar scale for peer conflict where 0 indicted no conflict, 50 indicated some arguing/ bickering but resolution of conflict and 99 indicated severe conflict where there was the threat of or actual psychological or physical abuse. Demonstrating the strength and lasting effects of peer relationships on an individual's later development, Chen

and colleagues (2009) found that at 17 years old, their participants had an average daily contact with their peers ($\bar{x}$=93.87 SD±19.40) that reduced to twice weekly contact (x̄ =74.32, sd±18.00) by the age of 29. The number of episodes of conflict at age 17 was one of moderate but substantially varying levels of conflict (x̄ =29.1, sd±15.3) which reduced as the participants got older ((x̄ =23.2, sd±13.2). Peer contact was significantly associated with peer conflict during transition to adulthood (β=26.15, p<0.001) and this was also reflected in the adolescents who had a psychiatric disorder at age 17. Those with a history of adolescent major depressive disorder, substance abuse or disruptive behaviour reported significantly more conflict in combination with more peer contact as adults. This suggests that peer conflict somehow plays a role in maintaining psychopathology from adolescence to adulthood. For example, in this sample disruptive behaviour predicted peer conflict even when peer contact was controlled for (β=7.92, p<0.0045). Finally, providing evidence of the supportive nature of peer relationships in adolescence, Chen et al., (2009) found that in anxiety and depression disorders were associated with higher levels of peer contact perhaps suggesting a higher level of help seeking within these individuals where support is more frequently needed and sought. Indeed the results for anxiety disorders demonstrated increased peer contact which was significantly associated with reduced peer conflict (β=-0.096, p<0.0001).

Certainly the results in this section highlight the influential nature of peer relationships and the importance of exploring them in adaptation to psychopathology in adolescence.

4.1.2 Family relationships

Whilst individuation is undoubtedly important it should be remembered that success does not mean a comprehensive break away from the parents, rather a restructuring of the relationship where primary attachment figures still ideally serve as a source of support and security. It is therefore essential not to discount these relationships when considering sources of social support. Collins and Feeney (2000) proposed, estimated and tested a model of social support, support seeking, caregiver quality and perception of support and found an impressive fit to their data (CFI=1.00, x̄ (6, 93)=3.73, p=0.71). It demonstrated that individuals who rated their stress as higher sought help more directly. This was met with more care giving behaviours that individuals perceived as more supportive resulting in better mood. Indeed, it has been proposed that, in fact, parents remain important in personal contact (Meeus & Dekovic, 1995). Furthermore, Stadler and colleagues (2010) found that high levels of parental support offered protection against maladjustment in their adolescent sample, In

addition, when dividing the groups into age groups of 11 – 14 and those aged 15 – 18, parental support moderated the effect of victimisation more in the older group. These results also highlighted the ongoing challenges of individuation. For example, older adolescent females rated no benefit from parental support yet those who had been victimised by their peers were at higher risk of developing mental health difficulties due to lower rated levels of parental support. So on the one hand, individuals are trying to gain independence yet still need to perceive support from their parents.

The importance of social support provision in formative years should not be underestimated. Champion, Goodall and Rutter (1995) reported a prospective study where social support was compared from children aged 10, interviewer based assessment of a range of family and peer relationships, to the same individuals 20 years later. The adult sample completed the significant others scale (SOS: Power & Champion, 1988) to assess the perceived and ideal ratings of support from up to six individuals identified by the participant. The measure covers both emotional and practical support and incorporated at least one close relative and one close friendship. The measure also records the actual and ideal levels of support received and the discrepancy between the two scores. As Champion et al., (1995) reports, the better quality of relationship with the mother when participants were aged 10 was significantly correlated to the perceived and ideal support rated 20 years later. This was also found to be similar for fathers. Of note, peer relationship difficulties in childhood were associated with higher levels of discrepancy between actual and ideal levels of social support recorded by participants when they were adults. Arguably, the level of dissatisfaction or frustration with interpersonal relationships in childhood was integrated into the internal working models of these individuals and this perpetuate on into adulthood.

Indeed, a lack of social support from parents has been associated with higher levels of psychopathology (Reicher, 1993), been predictive of depressive symptomatology (Kandal & Davies, 1986; Windle, 1992) and drug abusing behaviour in youths with multiple adjustment disorders (Beitchman et al. 2005). Similarly, Stice and Randall (2004) found that deficits in parental support predicted the onset of a major clinical depression in their sample of 496 female adolescents without mental health difficulties (OR=0.46, p=0.001). In terms of perpetuating difficulties, these authors also found that a diagnosis of major depression in adolescence also predicted decreases in perceived social support from peer relationships (β=-0.13, p=0.001) but, interestingly, not parental support.

Sheeber et al, (1997) examined family functioning and adolescent depression in 421 families over a one year time period. Using structural equation modelling the authors found that a lack of family support was significantly associated with depression in adolescence at both baseline and follow up (β=-0.41, β=-0.41 respectively) demonstrating that a lack of social support predicts depressive symptomatology. In terms of methodology, the authors noted significant chi square results, thus suggesting covariance within the model, but demonstrated a good fit of the model using fit indices of CFI = 0.97 and NNFI = 0.96. Importantly, the authors also looked at directional pathways and found the depression in adolescence did not predict perceptions of family support at follow up. This is suggestive of social support being an antecedent in the development of psychopathology in addition to being a risk factor in maintaining difficulties. Indeed, whilst Needham (2008) found that during the transition to adulthood from adolescence, there was an initial inverse relationship at adolescence (mean age 15.28 years) between lower depression and increased parental social support yet by the end of the transition period (mean age 21.65 years) those who had experienced an increase in depressive symptomatology reported lower levels of social support from their parents. Indeed, it can be concluded that similarly to peer relationships, an adolescent's perception of the support they receive from their parents appears to be important in their development and adaptation to psychopathology.

4.2 Amount of support

The amount of support and individual utilises in their external social world is also important considering that a deficit in social support can act as a stressor in itself (Champion, 1995). Higher perceived satisfaction has been correlated to size of support network where more numerous avenues of support led to higher ratings on social support measures (Priel & Shamai, 1995). Falci and McNeely (2009) suggest that there is an optimum size for adolescent social networks which is approximately nine individuals based on a general non clinical adolescent population (n=9097). The authors found that as networks increased above this number or decreased below this number higher levels of depression were recorded. The amount of strain placed on an individual to maintain large networks could well account for a decrease in mood whereas those with fewer friends may not have a sense of belonging and feel that they lack support from their friends. Indeed, the authors found the perception of social relationships mediated the effects of depression (e.g. reduced the reporting of depressive symptoms) but only where networks were smaller, not where they were too large. Considering that mental health difficulties are associated with smaller social networks (Goldberg, Rolling & Lehman, 2003) the effect of perceived support in mediating any

negative effect of depression in smaller social groups should be considered in future work. For example, the social network sizes in adult schizophrenia tend to average about five individuals and are less likely to involve family members (Pernice-Duca, 2008) so examining the perceived support this group may or may not have felt would provide some answers to how the mechanisms of social support functions for the individual.

Thorup et al (2006) proposed that both qualitative and quantitative social relations are important for mental and physical health suggesting that decreased social contacts increase mortality rates in individuals with mental health difficulties. The authors found social network size, specifically small networks, were associated with longer duration of untreated psychosis, poor premorbid adjustment and negative symptoms. Interestingly, and in contrast to stigma research, neither service use nor psychotic symptomatology influenced network size. This lack of relationship between symptomatology and network size indicates that there are alternative reasons behind the association of mental ill health and the size of networks. One such argument could be that individuals could have smaller networks before the onset of psychopathology, perhaps a premorbid adjustment prior to the onset of difficulties, as seen in the onset of psychosis (Davidson et al., 1999; Larsen et al., 2004). As further evidence to this proposal, Thorup et al., (2006) also indicted that number of friends at entry into service predicted the number of friends at follow up 2 years later. Moreover size of support network was also examined in a study by Kandal and Davies (1986) who found that, despite illness, depressed adolescents managed to maintain their circle of friends throughout their illness. However, no mention was made of the quality of these friendships by the authors. The perception of the adolescent about the level of support received from their friend could equally have been one of satisfaction or dissatisfaction, therefore precluding the ability to draw conclusions about the quality or the function of social support. This study highlights how considering social support by size only can lead to a lack of answers in understanding how this mechanism works. To resolve this, the qualitative nature of social relationships needs to be investigated in addition to the quantitative. Indeed, the discussion to this point has highlighted the importance of the source of support and amount of support whereby smaller networks and a lack of support from both family and peers can lead to difficulties in adaptation within adolescent. The third element of related to the external social environment requiring investigation is the quality of the support received in terms of both the amount and how satisfactorily it is perceived.

4.3 Quality of relationships

In a seminal longitudinal study conducted by Skolnick (1986), following participants for 40 years from infancy, it was found that the quality of childhood relationships significantly predicted the quality of adolescent peer relationships that subsequently predicted the quality of adult relationships and their psychological health. Indeed, Champion (1995) states that poor quality relationships predispose an individual to future relationships of a similar nature. 'Quality' in these studies refers to the amount of satisfaction an individual has with the support they receive.

In the case of familial relationships, the premise is that supportive relationships develop with the context of early attachment relationships where, in the optimum experience, the infant experiences their caregiver as both available and responsive to their needs. The individual forms internal working models on which to guide future interpersonal experiences which continue on into adolescence and adulthood. When parents are not available to their children to provide support, provide inconsistent responses or reject support seeking attempts difficulties arise for the adolescent and any distress they may be experiencing. For example, inter parental conflict has been associated with increased psychopathology in young adults (Neighbours, Forehand & Bau, 1997). An example of limited parental support is when parents are experiencing a mental health difficulty themselves. Certainly adolescents who have parents with psychopathology have also been found to be developmentally vulnerable to mental health difficulties themselves (Beardlee et al., 1983).

Using a sample of 40 adolescents (mean age 13.98 years, sd±2.14) who had either a mother (n=33) or father (n=7) with mental health difficulties, Hoefnagels Meesters and Simeon (2007) investigated adolescent symptomatology. In adolescents with psychiatrically ill parents the authors found perceived stress and negative social support from parents were found to predict psychopathology levels in the adolescents and accounted for 50% of the variance. Roustit, Campoy, Chaiz and Chauvin (2010) also found that a lack of parental emotional support, a lack of extra familial social support and low self esteem was found to mediate the relationship between parental psychological distress and adolescent internalizing disorders (β=-0.14, β=-0.17, β=-0.44 respectively). In fact the direct relationship between parental distress and internalizing disorder was fully mediated when a lack of social support was added in (β=0.17, $p<0.001$ reduced to β=-0.05, $p>0.05$). A potential coping mechanism for dealing with parental mental health difficulties was suggested by Werner (2003). The author conducted a longitudinal study following participants for 32 years who had been

exposed to parental psychopathology, family environments with chronic discord and high levels of poverty found that the most resilient of this at risk sample were those individuals who looked for and discovered social and emotional help outside their own family (see Werner 1993 for comprehensive findings). Arguably, these results were echoed by Hoefnagels et al., (2007) who found adolescents perceived social support independently of their parents and is a reflection of adolescents looking outside their parents for emotional and practical support.

A further consideration when assessing the quality of social support is that of reciprocity. Pearlin (1985) suggested that when an individual cannot reciprocate in a relationship, a 'caring debt' develops which can become a major source of stress for that person. Indeed, the low self esteem associated with depressed patients has been found to result in them focusing on the negative side of receiving support (e.g. they will be unable to repay a caring debt) (Parry, 1988) thus resulting in them reporting being less likely to use or accept support. Reciprocity in social relationships is particularly emphasised in peer relationships during childhood and adolescence where individuals feel validation in both offering and receiving support. This has been highlighted in the study by Kelly and Jorm (2007) who asked adolescents to hypothetically consider what they would do if a friend had mental health difficulties. The main response was to offer social support (e.g. listening to them), offering advice or helping them to distract themselves from the problem. Adolescents who were not comfortable providing social support demonstrated a desire for distance from peers and demonstrated poorer social skills than those who were comfortable answering the question. This may reflect a certain amount of self awareness in individuals about how much they believe others will or will not benefit from support they endeavour to provide. On the other hand, if self isolation is their strategy to avoid providing support, however, these individuals may find their social support systems shrinking and isolation itself becomes problematic as reciprocity decreases.

The concepts of both satisfaction with and reciprocity in social support were examined in a sample of young adults with schizophrenia (age range 18 – 30 years) by Angell and Test (2002). The authors recruited a sample of 87 individuals who were already enrolled in a long term assertive community treatment program and followed them up at 6 monthly intervals from entry into the service until the end of a seven year period. What is reported here are the results of assessment at 18 and 24 months into the study. Satisfaction with social support was significantly associated with the size of network and reciprocity within the relationship at

both time points into service. In terms of clinical relevance, the authors also found that both social support and reciprocity were negatively associated with positive symptoms (e.g. thought disturbances) where reciprocity and satisfaction decreased as symptomatology increased. This could be a reflection of the increasing 'caring debt' an individual experiences as clinical difficulties limit their ability to reciprocate support within the relationship. This perceived caring debt could exacerbate the difficulties in an individual's functioning where the stress of not being able to reciprocate in relationships make them more vulnerable to psychopathology. If this is the case, a consequence could be them isolating themselves from this source of stress so at the same time withdraw from their social network at the expense of any benefit it may also be providing.

Of methodological consideration, in many studies the 'quality' of relationships is rated or measured by persons other than the one receiving the support for example, parents for their children (e.g. Kobak, Sudler & Gamble, 1991) or teachers for their pupils (e.g. Parker & Asher, 1997). These are perilous conclusions to draw on if reporting on social support as it assumes satisfaction or dissatisfaction rather than evidencing it. Subjective reports of social support would certainly enhance empirical work.

It is evident that the quality of relationships plays a significant role in the adaptation of adolescents. Parents with mental health difficulties, interparental conflict and a lack of emotional support have been associated with developmental psychopathology particularly in adolescence. Coping mechanisms in adolescence are suggested to be seeking support outside the family, perhaps providing an answer as to why peer relationships are so important in this developmental stage. In addition, there is evidence to support the proposal that adolescents value their ability to provide support in their interpersonal interactions. This can then become a source of dissatisfaction for them if they are unable to fulfil this role. However, further investigation is needed to explore if the inability to reciprocate in social relationship is a result of a developing mental health difficulty or whether it precedes symptoms and acts as a source of stress for the individual and becomes a potential risk factor.

4.4 Models of stress and social support

Stress and social support are inextricably linked both in research and theory. Indeed, access to social support has been found to mediate the effects of perceived stress (Friedlander, Reid, Shupark & Cribbie, 2007) with higher levels of support reducing stress (Norris & Murrell, 1984). This is important as increased psychological well being has been found to be

correlated to lower levels of stress (Winefield, Winefiled & Tiggerman, 1992). Further to this, in the relationship between psychological well being and lower levels of stress, adding social support has been found to double the explained variance accounting for an individual's well being (Winefiled et al., 1992).

4.4.1 Life events

Compas (1987) hypothesised that life events have an effect on the life, coping and developmental skills of an individual and believed such events are more pervasive during the developmental trajectory of adolescence. Negative life events are defined by the demands they make on an individual and Ayer and Hudziak (2009) proposed that the difference in the stress and impact on an individual is dependent on whether life events are acute or chronic. The authors propose that in adolescence negative life events have more impact on their levels of stress and the development of mental health difficulties than in adults. These are findings similar to those of Cohen and Wills (1985) in the general population, who postulate that stress may not arise from a single event but could be a cumulative problem increasingly testing the coping resources of an individual. They propose that when an individual feels they cannot cope the mechanisms of social support can protect them from the development of a pathological outcome. However, this same situation also makes them vulnerable to experiencing a 'caring debt' where in interpersonal relationships they cannot support others or a loss of self efficacy where the failure to cope is attributed to self and internalised.

There is evidence, albeit limited, demonstrating a relatively robust association of major negative life events predicting mental health difficulties in adulthood but research in adolescence has been rare (Compas, 1987; Ystgaard et al., 1999). Ystgaard et al., (1999) attempted to address this by conducting a longitudinal study investigating 211 high school adolescents at two time points, baseline and an 18 month follow up. The authors found that long lasting adversity in the previous 12 months predicted higher levels of distress in both males and females (β=0.23 and β=0.29 respectively). Debating the effect of acute or chronic negative life stressors, where acute events have a clearly defined beginning and end and where chronic events have an insidious start and remain ongoing, these results should be delineated further. The 'long lasting adversity' checklist used by the authors incorporated ten broad categories that were considered chronic life events (e.g. problems with friends, studying pressure), that were rated to cover the proceeding 12 months. The findings in this study of chronic negative life events having a significant effect on levels of distress are certainly in accordance with a proposal from Compas (1987) who suggested adolescents are

significantly more affected by ongoing difficulties than 'one off' acute events in the context of mental health difficulties. Indeed, the impact of the life event on the young person's functioning needs to be considered and what the likely risk is for lasting change or the development of psychopathology (Champion 1995).

Unfortunately there are few prospective studies investigating life stress and later dysfunction in both adulthood and adolescence even though negative life events have been found to significantly relate to poor clinical outcome in depression (Brugha, Bebbington, Stretch, MacCarthy & Wykes, 1997). However, a review of child and adolescent literature investigating stress, life events and the development of psychopathology, Compas (1987) concluded that, at most, life events only counted for approximately 15% of the variance in symptoms. Conversely, Kobak, Sudler and Gamble (1991) found a moderate association between negative life events and depression in adolescent although these latter results should be considered carefully because the life events were those reported by the mothers' of the teenagers, not the adolescents themselves. Undoubtedly, some adolescents are less likely to report negative events to parents nor indicate the true experience of distress from them. This may result in parents either not knowing about all potentially disadvantageous events or misinterpreting the impact they have on their adolescent.

4.4.2 Stress 'buffer' hypothesis – a protective mechanism

A stress 'buffer' hypothesis has been endorsed (Aneshensel, 2009; Cohen & Pressman, 2004) whereby social support is proposed to have a differential effect on the well being of an individual dependent on the level of stress being experienced (Huang, Sousa, Tsai & Hwang, 2008; Frank et al., 1997). This model primarily suggests that social support is related to well being only when the individual is experiencing distress. In comparison the main effects model suggests that social support is helpful regardless of whether someone is experiencing stress or not (Cohen & Wills, 1985). For the purposes of this piece of research focus is on the stress 'buffer' model considering all adolescents included will be experiencing a mental health difficulty and consequently, higher levels of stress. Cohen and Wills (1985) propose that social support can intervene at two time points and help reduce the stress experienced by the individual. The first one is at the appraisal stage where a potentially stressful event has occurred and the individual is trying to make sense of it. They utilise social support to help them interpret, cope with and or redefine the situation. The second time point is after an event as been processed as stressful and the individual relies on sources of support to help

them manage their emotional response and or help find a solution to the difficulty. In this way, the function of social support is to alleviate the impact of the stressful situation.

Higher levels of perceived social support are associated with adjustment and health outcomes (Sarason, Pierce & Sarason, 1990), increased well being (Lindberg & Swanberg, 2006; Suldo & Schaffer, 2008), quicker recovery from psychopathology (Johnson, Mayer, Winett & Small, 2000) and decreased likelihood of relapse (Cohen, Hammen, Henry & Daley, 2004). For example, support from friends and family was perceived as beneficial in both disturbed and non-disturbed adolescents in a large sample of high school students (n=497) (Steinhausen & Metzke, 2004). In addition the authors also found that peer acceptance was found to be a protective factor in internalising disorders and a compensatory factor in internalising disorders.

The effect of social support on mental health was negatively associated with stress in a university population of 1257 participants (Bovier, Chamot & Perneger 2004). The authors found that internal resources of the students 'buffered' the impact of stress on mental health and there was significant association between higher levels of social support and lower levels of mental health difficulties. Furthermore, Langeland and Wahl (2009) found that whilst social support did not predict change in mental health symptoms in an adult clinical population it did find it improved an individual's sense of coherence (ß=0.32, p=0.016) thus linking back to the aforementioned inner resources of the individual whereby these resources contribute to the individual's assessment of their social support.

Within clinical samples, social support has been found to moderate the impact of stress in adolescents and adults with psychotic disorders (Henry & Coster 1996), facilitate improved outcome in first episode psychosis (Mattsson, Topor, Cullberg & Forsell, 2008), reduce conduct disorder and depression in children (Appleyard, Egeland & Sroufe, 2007; Cole, Martin, Powers & Truglio, 1996) moderate levels of adolescent depression (Piko, Kovacs & Fitzpatrick, 2009; Sheeber, Hops, Alperty, Davis & Andrews, 1997; Wright, Botticello & Aneshensel, 2006) and partly predict psychosocial functioning one year after treatment in youth alcohol or drug (Anderson, Ramo, Schulte, Cummins & Brown, 2008)

Social support has also been found to facilitate recovery after trauma (Caffo, Forresi & Lievers, 2005; Chapman, 2003) and account for 55% of the variance in positive adaptation after physical or sexual abuse in an adult sample (Runtz & Schallow, 1997). In contrast, PTSD symptoms in trauma survivors have been correlated to a lack of social support

(Brewin, Andrews & Valentine, 2000). Further investigation into recovery was a study conducted by Wells, Wyatt and Elizabeth (1991) who found that social support, particularly family support, was strongly related to youth (aged 14 to 20 years) adaptation after being discharged from residential treatment. Brugha et al, (1997) found recovery to be dependent on the levels of social support at hospital admittance where faster recovery was associated with higher levels of support. Of note, the authors noted this 'buffering' effect was not effected by size of network, highlighting, once again, the need to understand the quality of social support relationships rather than just the size.

In an effort to understand the reasons why individuals did not seek help for mental health difficulties, Gulliver, Griffiths and Christensen (2010) conducted a systematic review of the quantitative and qualitative barriers or facilitators to help seeking in young people with anxiety or depression disorders. Due to the small number of studies found (n=22) the authors listed pertinent results rather than conducting statistical analysis yet the results demonstrated the importance of social support for adolescents. There was evidence for past experiences of positive social support facilitating future help seeking behaviour in adolescents. In addition, Offer et al., (1991) found that seeking support from family and friends was deemed beneficial by groups of disturbed and non disturbed adolescents.

Promisingly for service development a pilot study has been commenced using a randomised control trial to investigate the effect and feasibility of a peer support program for young people recovering from a first episode psychosis and being discharged from service (see Robinson et al., 2010). Indeed, Fukuui, Davidson, Holter and Rapp (2010) found significant improvements in social support, self efficacy and self esteem in peer led recovery groups (Fukui, Davidson, Holter & Rapp, 2010). This is particularly relevant when considering the findings of Moses (2010) who found 62% of the adolescent sample who had been diagnosed with emotional or behavioural disorders had suffered stigmatisation which had resulted in friendship losses or transitions. Of this stigmatisation, 46% had received it from family where unwarranted assumptions, pity, and avoidance were some examples described. Those reporting less or no stigmatisation identified with socialising with others 'in the same boat' in response to their difficulties. Peer developed and led support programs, therefore, can provide sources of support for individuals or groups who have been marginalised due to their mental health difficulties.

There is a clear relationship between social support relationships and psychological well being where higher perceived social support is associated with better psychological adaptation where there is evidence of social support acting as a 'buffer' in reaction to stressful life events. In contrast poor, or lacking, social support has been associated with increased psychopathology, distress and poor psychological well being and functioning.

4.5 Lack of social support and psychopathology

Poor social support has been associated psychopathology in adolescence and adulthood (Bergeron et al., 2007, Cohen, 2000; Muller & Lemieux, 2000; Parker & Asher, 1987; Sroufe, Duggal, Weinfield & Carlson, 2002; Ystgaard, Tambs & Dalgard, 1999), increased hospitalizations (Cohen, Hammen, Henry & Daley, 2004; Huang, Sousa, Tsai & Hwang, 2008; Lamb, 1982) and heightened sensitivity to distress (Onwumere et al., 2009). Moreover, low social support has been associated with adolescent borderline personality symptoms (Winograd, Cohen & Chen, 2008) and low ratings of quality of life in obsessive compulsive disorder (Hou, Yen, Huang, Wang & Yeh, 2010). Examining the association between delinquency and risk behaviour in adolescence, Durant, Knight and Goodman, (1997) found that problems in peer relations, family relations and mental health accounted for 47.7% variance on an aggressive behaviour/ delinquency scale.

In a sample of 521 children aged between 11 and 14, Rockhill, Stoep, McCauley and Katon (2009) investigated the effect of social support and competence in depressive and conduct disorders problems. They divided the sample into four groups, those at risk for depression alone, those at risk for conduct disorder lone, those at risk from co morbid difficulties and those not at risk of either. They found group membership was associated with perceived support with those reporting higher levels of support being less likely to be in the depression or comorbid group. Further to this they found that those in the comorbid group rated lower levels of friend/ peer support than the conduct disorder group, and lower family/ teacher support compared to the other three groups. A further example of difficulties existing within social relationships and mental health is provided by Ballon, Kaur, Marks and Cadenhead (2007) who purported that deficits in social functioning are a potential risk factor for schizophrenia. The authors found that both adolescents 'at risk for' or suffering a first episode of schizophrenia demonstrated significant difficulties within peer, family and school relationships compared to those in a non clinical control group.

Smith and Anderson (2000) investigated a group of adolescent suicide attempters to suicidal ideators and found that attempters had significantly more positive social support than the ideators ($\chi^2(1,100) = 4.86$; $p<0.05$) for example, having someone to talk to or rely on when you need help. Additionally, attempters also scored higher on negative support severity (e.g. reporting a fight all the way through to reporting abuse). Those that had had attempted suicide rate more perceived social support but also reported higher severity of negative support than those who were admitted to services as ideators. Wilson and Deane (2010) replicated these results where they found that suicide ideation was associated with lower help seeking from friends, family and mental health professionals. Indeed the intention of the individual was to deliberately not seek help and when the authors added depression to this relationship they found that it moderated it (e.g. it strengthened an individual's resolve not to seek help). It may therefore, not be surprising that multiple suicide attempters in a sample of psychiatrically hospitalized adolescents could be differentiated from single attempters by lower levels of social support (Merchant, Kramer, Joe, Venkataramen & King 2009).

4.6 Discussion

This part of section 1 highlights a number of areas for further investigation into the construct of social support and the role it plays in the outcome and psychological well being of an individual. Firstly, the fact that a clear definition of social support has been difficult to establish has led to a variety of approaches investigating the concept including focus on size of network, sources of support, the positive and negative effects of social support and the quality of support received. Whilst these findings have shown a clear association of both positive and negative effects of social support on outcome, the diverse methodological and conceptual approaches preclude comparative analysis of the studies. Making such conceptual distinctions would certainly aid future empirical work.

Secondly, adolescence has been identified as a key developmental stage to investigate social support considering the changing nature of family and peer relationships (del Valle et al., 2010) and the vulnerability of this group to developing psychosocial difficulties central in the development of mental health difficulties (Gower et al., 1999). Unfortunately, whilst trying to assess childhood and adolescent social support, many studies have investigated retrospective association of support and outcome (e.g. Sarason et al, 1991) and are thus subject to recall and accuracy biases. What is needed both longitudinal and contemporary studies to assess the individual's current functioning and perception of social support. This is especially important considering perceived social support has consistently demonstrated

stronger correlations with health and adaptation than the actual level of support (Collins & Feeny, 2004; Sarason et al., 1991) . This study will attempt to fill this gap in knowledge.

Thirdly, very few studies have investigated the mechanisms of social support so we understand very little as to why social support has such an impact on well being. The association of positive social support facilitating adaptation and recovery, and poor or lacking support being associated with psychopathology and interpersonal difficulties makes this an important area for research. Particularly as the negative features of social support appear to correlate more strongly than positive features on both perceived support and psychopathology (Coyne & Downey 1991).

These results provide compelling evidence that this construct has an underlying commonality. The inner resources of the individual in terms of self organisation and understanding are proposed to be that commonality, and were examined in Part I of this section within the developmental framework of attachment.

Returning to Hinde's proposal (1979) that personal relationships develop through multiple and continuous social interactions over time and have behavioural, emotional and cognitive features, it makes sense to consider social support within the context of attachment. Consider how an individual utilises and interacts with their social support network; they turn to it for comfort and proximity at times of distress, explore new behaviours within it, and mourn losses and transitions that occur. Arguably these reflect the criteria that are used to define attachment relationships (Ainsworth, 1989; Cassidy, 1999). Also, the attachment system 'activates' on stressful life events, events where social support is normally utilised. Therefore, conceptualising the development of social relationships within the context of early attachment related experiences, and how these influence subsequent interactions with the world, will aid our understanding of the influential factors that govern the construct of social support. Indeed, there is comprehensive evidence that different attachment styles are linked to systematic differences in perceptions of and use of social support (Collins & Feeney, 2004) and are responsible for shaping how an individual perceives their social world. Furthermore, there is growing evidence that the development of psychopathology can disrupt social behaviours and thus make it more difficult for the adolescent to develop and maintain satisfying relationships (Sheeber et al, 1997).

This study will investigate both the inner resources of the individual and their corresponding external social word by carefully defining sources of social support, the emotion or practical function it serves and the quality of interpersonal relationships within their social networks. It will focus exclusively on the developmental period of adolescence, measure attachment states of mind and investigate reflective function to gain an accurate understanding of the individual's internal working model, ability to assess the mental states of themselves and others and how this impacts on the way they use social support and the satisfaction they have with it. This thesis will also allow the measurement of if and how much social support moderates the relationship between attachment, mentalization and psychopathology. Indeed, as Dykas and Cassidy (2007) propose;

'Another important avenue for future research is the examination of whether attachment relevant social information processing mediates or moderates, or both, links between attachment and different indicators of adolescent social and emotional adjustment' (p.51)

Part V - Overall conclusions and hypotheses

5.0 Overall conclusions

Bringing together both Part I, II, III and Part IV of this chapter to formulate hypotheses for this study, the following conclusions have been drawn thus far;

- Early caregiving relationships form attachment styles in individuals and are represented by internal working models that form the expectations about the self and others.
- A secure attachment fosters the development of mentalizing skills, insecure attachment relationships inhibits this process.
- Mentalization allows an individual to understand themselves and others as intentional beings.
- Insecure attachment is highly represented in clinical samples (adolescent and adult) and associated with poor psychological adaptation as is poor mentalization measured by the psychological process of 'reflective function' (RF).
- Insecure attachment is associated with maladaptive emotion regulation strategies of over or under regulation that lead to higher levels of experienced and displayed distress.
- Insecure attachment and poor RF impede the development of successful social support relationships causing interpersonal difficulties thus making an individual vulnerable to poor adaptation due to a lack of satisfying social support.

This author proposes that early attachment related experiences underlie the successful ability to regulate emotions and develop the necessary mentalization skills for organizing both the self and the understanding of others. A secure attachment style and internal working is associated with the ability to regulate emotions, develop successful interpersonal relationships and facilitate psychological adaptation through mentalization within the individual. In contrast, an insecure attachment can lead to maladaptive emotion regulation strategies, difficulties in interpersonal relationships and vulnerability to developmental psychopathology through inhibited mentalization. More specifically, individuals with an insecure attachment style are more likely to utilise maladaptive emotion regulation strategies of 'over regulation' or 'under regulation' on the activation of their attachment system. As discussed previously, this is likely to lead to the defensive exclusion or over inclusion of distress leaving the individual unable to integrate their experiences and make sense of them

(Crittenden, 1992). As a consequence, this is likely to lead to the employment of non mentalizing strategies because the individual feels under threat of being overwhelmed by their emotions and does not feel safe to explore their own mind and/ or the mind of others (Sharp et al., 2009) and difficulties with interpersonal interactions therefore become more likely.

Attachment styles and mentalization skills are therefore proposed, in this study, to be the independent factors in the development of adolescent psychopathology. However, this study proposes to investigate these concepts one step further. Latent structural modelling will be employed to establish causality for the already well established association between attachment, mentalization and psychopathology. The ability of the individual to regulate their emotions, utilise social support and interpersonal skills are proposed to be mediating mechanisms, dependent on attachment style and mentalization skills that account for the variation in the psychological adaptation of the individual. This hypothesis is represented in the diagram below (figure 5.1).

5.1 Hypotheses

The questions, therefore, being asked of this data were as follows:

1) Does attachment and reflective function directly and indirectly predict psychological adaptation to mental health difficulties as hypothesised?
2) Do the latent variables of emotion regulation, interpersonal difficulties and social support fully mediate the effects of attachment and reflective function?

Specific hypotheses were proposed as:

1) Attachment and mentalization will be associated with developmental psychopathology with a majority of insecure attachment styles and poor reflective function shown in the sample.
2) Attachment and mentalization will be associated with an individual's psychological adaptation and mood when experiencing a mental health difficulty. This relationship will be mediated by the underlying mechanism of emotion regulation.
3) Interpersonal difficulties will be associated with insecure attachment styles and poor reflective function and will be negatively associated with psychological adaptation and mood.

4) Perceptions of social support will be associated with low mood and the psychological adaptation of the individual. Perception of support will be predicted by attachment style and levels of reflective function.

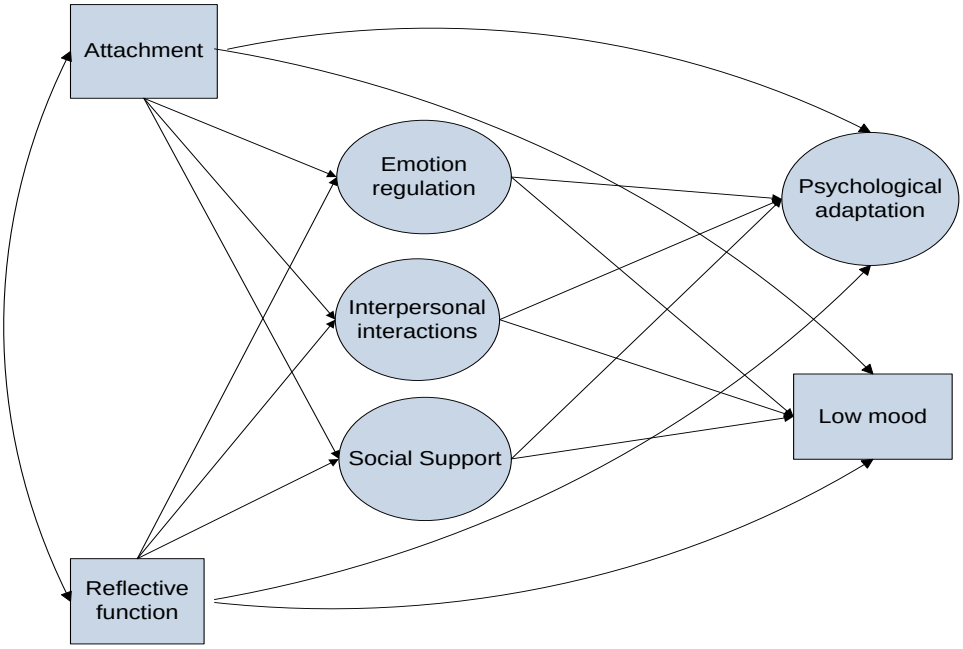

Figure 5.1 Hypothesis: Attachment style and mentalization effect psychological adaptation and are mediated by emotion regulation, social support and interpersonal interactions.

Section 2

Study design and methodology

Study design and methodology

6.0 Design

This study utilised a cross sectional cohort design to characterise a sample of adolescents with mental health difficulties attending the Child and Adolescent Mental Health Services (CAMHS) in NHS Lothian. Individuals were recruited from three Tier IV services covering severe and enduring mental health difficulties in adolescents: An Early Psychosis Support Service (EPSS), a Day Programme service and the adolescent In Patient Unit.

EPSS is a unique specialist early psychosis service in Scotland for adolescents aged between 13 and 18 (with acceptance into service until the day before their 19th birthday) that provides intensive community treatment and a group programme for those suffering with psychosis. Patients can remain with the service for a three year period to promote and facilitate an optimum path of recovery. The Day Programme is an intensive treatment day service for adolescents aged between 13 and 17 who have severe and enduring mental health difficulties with the exclusion of psychosis. It runs a three day a week group programme including psychodynamic group therapy, art therapy and a recreation group. In addition, the service offers community and hospital appointments and can support individuals five days a week (e.g. meal time support for patients with eating disorders). The In Patient Unit accepts patients with severe and enduring mental health difficulties up to the age of 18 who cannot manage in the community due to the high levels of distress and difficulties they are experiencing. A large number of their patients are discharged to the Day Programme where the aim is a careful reintegration into the community focusing in particular on school return and the facilitation of peer relationships.

Recruitment was conducted over the period from May 2008 to December 2010 and the author was responsible for all research measures collated.

6.1 Sample size calculation

As previously discussed, there is a dearth of studies using the Adult Attachment Interview in with adolescent samples experiencing mental health difficulties. Rosenstein and Horowitz (1996) conducted the AAI with 60 psychiatrically hospitalized adolescents (mean age 16.36 years) where 122 were approached (59 refused and 3 dropped out) whilst Allen, Borman-Spurrell and Hauser (1996) used a sample of 66 psychiatrically hospitalised adolescents compared to 76 sociodemographically similar high school students. Kobak and Sceery

(1988) reported a response rate of 37.5% and utilised a non clinical sample of 53 adolescents (mean age 18.2 years). In a significant meta analysis of attachment representations van IJzendoorn and Bakermans-Kranenburg (1996) found just four adolescent/ young adult samples (non of which were clinical) ranging in size from 53 to 90 participants (average n=69). In a follow up meta analysis Bakermans-Kranenburg and van IJzendoorn (2009a) found 12 non clinical adolescent samples that ranged in sample size from 25 to 152.

Using an online calculating device (http://www.danielsoper.com/statcalc/calc01.aspx) basing the estimate on an alpha level = 0.05, an anticipated effect size = 0.15, the conventional statistical power level = 0.8 and two predictor variables, the suggested sample size was 67.

6.2 Ethical Approval

This study was reviewed and received ethical approval from NHS Lothian Research Ethics Committee and managerial approval from the Research & Development department in Lothian (REC No: 08/S1101/4; See appendix 2)

6.3 Identification of potential participants

Participants were identified through their key workers, psychiatrists as the Registered Medical Officer (RMO), clinical psychologists or team members involved in their clinical care and were assessed for their suitability to take part in the research.

6.3.1 Inclusion criteria

Inclusion criteria were deliberately broad to capture a wide range of mental health difficulties. They were as follows:

I. Anyone attending CAMHS Tier IV services.
II. If the patient was legally detained in hospital they were still eligible to be considered for participation in the study. Detention in itself was not an exclusion criteria.
III. Similarly, suitability for consent was not governed by being able to consent immediately. Those participants where it was assessed may be able to consent in the future were monitored and suitability for consent assess on a weekly basis in close liaison with their clinical team.

6.3.2 Exclusion criteria

I. Participants who were unable to give informed consent.
II. Any young person under the age of 12.
III. Young people with a moderate to severe learning disability.

6.4 Approach and recruitment

After identification of suitable participants and through close consultation with the clinical team the research was introduced informally by the researcher to each potential participant at a meeting arranged to include their key worker. Here the research was introduced in an informal setting and the potential participant was provided with an information sheet (see appendix 2) outlining the research in greater detail and what would be required of them.

After the information sheets were given out the individual was given approximately one week to consider their participation. This provided an opportunity for them to speak to their family, friends or clinical team about their participation in the research if they wished to do so. At this point, participants were formally invited to take part in the research and sign the consent form (see appendix 2) along with the author. It was made explicit at all times that participation was voluntary and if the participant decided not to take part or withdraw from the study their care would not be affected in any way.

Those who took part signed a consent form and were given a copy, with copies of consent forms also placed in their clinical files. The author was responsible for retaining the original consent form.

6.4.1 Delayed recruitment

Suitability for participation was not governed by suitability for immediate consent at entry into any of the clinical teams. Suitability for the study can be assessed without immediate approach for consent.

6.5 Study recruitment flow and measure completion

90 individuals were identified as suitable for approach but 2 had a moderate learning disability and 5 were not engaging with services. This left a total of 83 individuals who were approached to take part in the research. Eight refused to take part leaving a total of 75 individuals entered into the study (a response rate of 90%). After recruitment 2 participants disengaged from services and therefore dropped out of the research before any measures

could be completed. This left a total of 73 young people who completed the study (see figure 6.1). Of this 73, 13 participants did not complete the adult attachment interview where 6 refused and 7 left the services before the AAI could be completed.

6.6 Measures

Beck Depression Inventory II (BDI-II) (Beck, Steer & Brown, 1996)

The BDI II is a 21 item self report measure with a 4 point likert scale for each question. It has been designed to assess the severity of depression of both adults and adolescents with a reported coefficient alpha of 0.92 on a sample of 500 psychiatric outpatients. Similarly, the coefficient alpha reported in a sample of 210 adolescents seeking psychiatric outpatient care aged between 12 and 17 was 0.92 (Steer, Kumar, Ranieri & Beck, 1998). Scores for each question are totalled and a final score recorded. Suggested guidelines are provided (albeit at a low threshold to avoid false negatives for clinical purposes) by the authors for level of depression severity and are as follows; 0-13 – minimal, 14-19 – mild, 20-28 – moderate, 29-63 – severe.

In this sample of 75 adolescents with severe and enduring mental health difficulties, the cronbach alpha was 0.96 indicating high internal validity of the scale in this population.

World Health Organisation Quality of Life (short version) (WHOQOL BREF)(World Health Organisation 1998)

The original WHOQOL 100 was developed to be a cross cultural tool that would capture an individual's perceived quality of life that reflected the move of the time to look beyond disease and morbidity to the impact it had and as such, have a person centred focus. The WHOQOL BREF was designed for practical purposes where the full 100 questions of the WHOQOL would not be pragmatic to complete. Instead, 26 questions were included (1 from each of the 24 components of the WHOQOL 100 plus two general health questions) to provide an alternative short version of the measure which is available in 19 different languages.

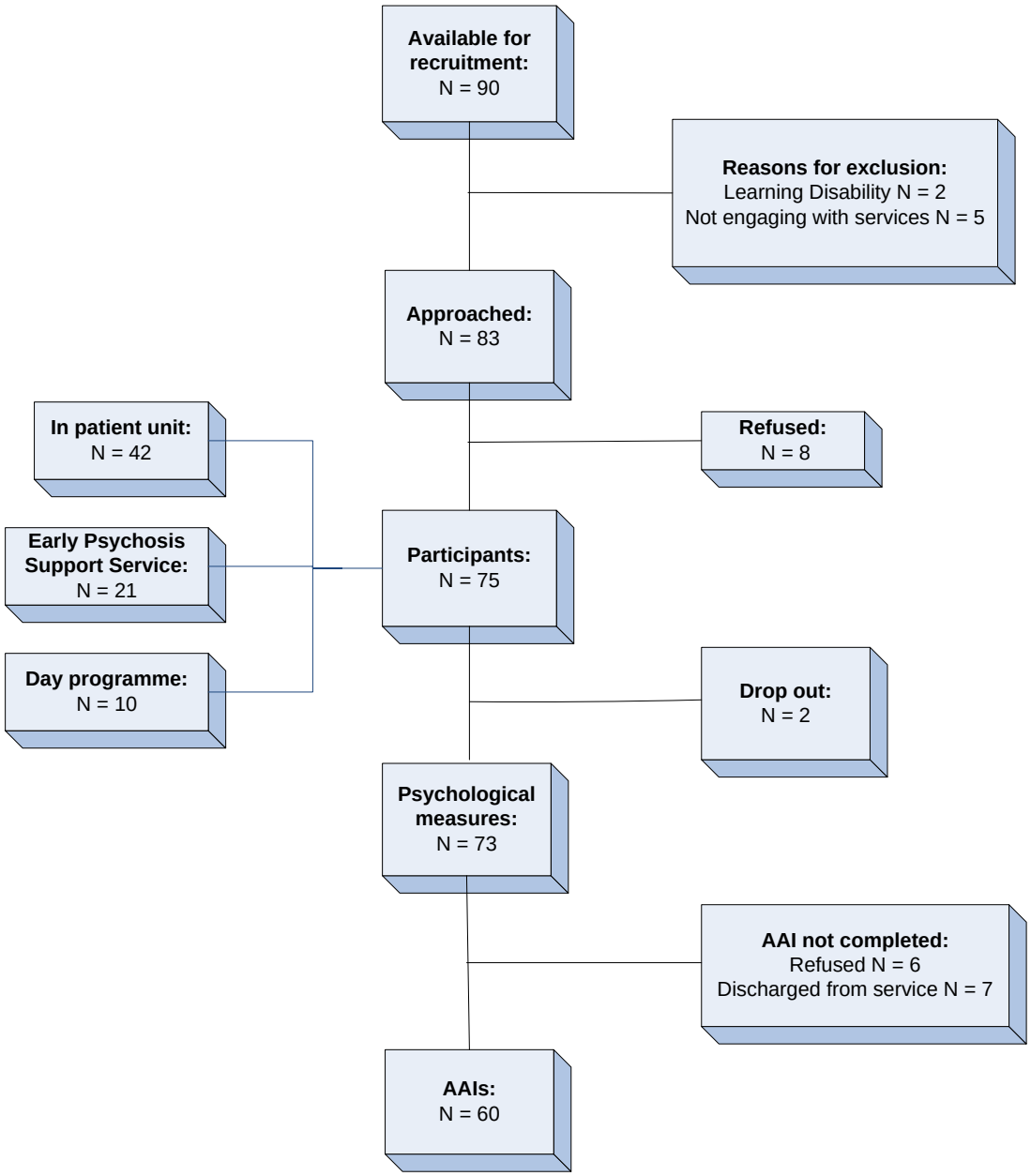

Figure 6.1 Participant recruitment flow and completion of measures

Scores from the WHOQOL BREF yield four domains of quality of life. 'Physical' quality of life measures the individual's perception of how able they are to perform activities of daily living, how much energy they have and how much they depend on medication as just a few examples. 'Psychological' quality of life assesses body image, self esteem and personal beliefs among its facets. 'Social' quality of life examines beliefs about personal relationships, social support and sexual activity with 'Environmental' quality of life measuring beliefs about financial resources, freedom and physical safety plus home environment to outline some examples.

In this thesis the cronbach alpha scores for the WHOQOL BREF subscales demonstrated high internal consistence and were as follows; physical quality of life was 0.74, psychological quality of life was 0.89, social quality of life was 0.76 and environmental quality of life was 0.84.

Inventory of interpersonal difficulties (IIP- 32) (Horrowitz, Alden, Wiggins & Pincus, 2000)
This measure was developed from the viewpoint that social relationships serve a central function in psychopathology, that these interpersonal experiences form representations that influence current and future emotions, thoughts and actions and beliefs about how others perceive us. This, of course, draws similar parallels to attachment theory but the authors draw on the work of Harry Stack Sullivan (1953) who postulated that every interaction served as a function of security (receiving love or intimacy) and self esteem (in terms of self worth, power or status) and impacted on the interpersonal functioning of an individual recurrently throughout the life span. Horrowitz et al, (2000) go on to discuss how combining interpersonal theory with social psychology and sociology produces the concept of 'complimentarity' where the interpersonal behaviour of one individual invites a particular response from another. When this response is not what was expected or desired frustrations on one or both parts leads to the development of interpersonal difficulties.

The IIP-32 was developed to assess the distress caused by interpersonal difficulties and provide an outcome measure for therapy and help clinicians understand interpersonal problems within the context of their current interpersonal functioning and previous experiences e.g. attachment related experiences. It is a 32 item self report questionnaire (Cronbach alpha =0.93) measuring an individual's perceived interpersonal difficulties. The first 20 items consist of behaviours an individual may 'find hard to do' e.g. 'find it hard to... put somebody else's need before my own'. The last 12 items consist of behaviours an

individual may engage in 'too much' (e.g. 'I am too aggressive toward other people'). Each item is rated on a scale from *0 Not at all* to *4 Extremely* with overall scores contributing to eight domains; domineering/ controlling, vindictive/ self centred, cold/ distant, socially inhibited, non assertive, overly accommodating, self sacrificing and intrusive/ needy.

In the sample of this study the internal consistency scores indicated a good level of internal validity with cronbach alpha scores on the following subscales: Domineering/ controlling = 0.75, Vindictive/ self centred = 0.84, Cold/ distant = 0.81, Socially inhibited = 0.85, Non assertive = 0.85, Overly accommodating = 0.71, Self sacrificing = 0.82, Intrusive/ needy = 0.75. The cronbach alpha score for the overall scale was 0.89.

Adolescent Coping Scale – Short Form (ACS) (Frydenberg & Lewis 1993)

The ACS was developed as a multipurpose instrument that can be used for clinical application, self help and as a research tool. It was developed to conceptualise how adolescents cope given the challenge of this developmental period. A short form of the original 80 item questionnaire was developed for practical reasons and consists of 19 items from the longer version. The measure consists of two forms, one assessing general coping and the other measuring specific coping that reflect concerns in general and situation specific difficulties respectively. The authors used factor analysis to compare the coping strategies highlighted in both the long and short version of the ACS and found 3 consistent factors which were labelled 'reference to others' (α=0.50 general; α=0.66 specific), 'non productive coping' (α=0.66 general; α=0.69 specific) and 'solving the problem' (α=0.61 general; α=0.66 specific). The three domains are measured over 19 items rated on a 5 point likert scale ranging from *1 Doesn't apply/ Don't to it* to *5 Used a great deal* for general and, if they identified one, specific worries or concerns.

In this thesis the subscales had the following cronbach alpha; 'solving the problem' = 0.77 (general), 0.83 (specific), 'reference to others' = 0.53 (general), 0.62 (specific) and 'non productive coping' = 0.64 (general), 0.73 (specific) indicating similar or better levels of internal consistency as the authors.

The Regulation of Emotions Questionnaire (REQ) (Phillips & Power, 2007)

The REQ was developed after the authors identified a need for a questionnaire measuring both adaptive and maladaptive internal and external emotion regulation strategies specifically utilised by adolescents. Factor analysis resulted in an 18 item four factor model

that were labelled 'internal- functional' (α=0.76), 'internal-dysfunctional' (α=0.72), 'external functional' (α=0.66) and 'external-dysfunctional' (α=0.76). The authors also found significant association between internally dysfunctional strategies and psychosomatic health problems (r=0.58) and both external and internal dysfunctional strategies to be significantly correlated to lower perceived quality of life and functional strategies to be associated with higher ratings of quality of life (measured by the KIDSCREEN 52; Ravens-Sieber et al., 2006). The measure is a 18 item questionnaire where an individual state how often they utilise the particular emotion regulation strategy stated e.g. 'I talk to someone about how I am feeling' across a 5 point likert scale from *'Never'* to *'Always'*.

In this sample the cronbach alphas were 0.68 for internal-functional, 0.81 for internal-dysfunctional, 0.77 for external-functional and 0.74 for external-dysfunctional.

Significant Others Scale (SOS) (Power, Champion & Aris,1988)

The SOS measure was developed to ascertain the social support received by an individual in terms of what they actually receive and what they would like to receive. It aimed to combine structural features (i.e. whether significant relationships do exist and who they are with) and functional characteristics (i.e. the type of social support received) with the short version allowing for up to 6 people to be described. The SOS thus allows the total social support score and the discrepancy scores (the actual support score minus the ideal support score) to be collated for each individual and for an overall total.

When developing this tool, Power et al. (1988) reported good test- retest reliability of between 0.73 and 0.83. They also used factor analysis for construct validity where three factors became apparent; 'emotional support', 'social fun; and 'practical support'. The authors argued that 'social fun' should be considered as a component of 'practical support'. Criterion validity was established comparing three independent groups of depressed people, one non-depressive group of psychiatric cases and a symptom-free group (as measured by the GHQ-28; Goldberg, 1978). The depressed group differed significantly on the SOS in comparison to the other groups in terms of ideal support, where they had higher ratings of what would be ideal, and a higher level of discrepancy between the support they had and the support they wanted.

The short version of the SOS is a questionnaire asking the participant to identify up to six significant people in their lives and rate the support each individual provides and what the

ideal level would be for the participant. The self report scale has 10 questions per identified person measured on a likert scale of *1 Never* to *7 Always*.

Social Support Questionnaire (F-SOZU) (Sommer & Fydrich, 1991)
This 32 item self report social support questionnaire captures four main qualitative aspects of perceived social support; emotional support, practical support, social integration and social strain (demonstrated cronbach alpha ranging from 0.77-0.92). It further has two additional dimensions; perceived overall satisfaction and reciprocity of social interactions. It comprises a series of statements which the participant has to rate their agreement over a 5 point likert scale ranging from *0 Not at all* to *4 Exactly right*.

In this thesis the cronbach alpha scores across the subscales demonstrated a large variability (from 0.32 to 0.91) so factor analysis was instigated to identify and compute composite scores for the factors underlying the short version of the social support scale. A principle-components factor analysis of the 32 items was conducted using varimax rotation, with the five factors explaining 61.1% of the variance. The factor loading matrix for this final solution is presented in Table 6.1.

The factor labels proposed by Sommer & Fydrich (1991) only suited some of the variables. Where this was the case the original label was used, where not, a new category was labelled. Factor 1 mapped on to the label proposed by the authors of 'social strain' with the loaded 14 items indicated in table 6.1. A substantial increase in alpha scores (from .73 to 0.91) for this scale was achieved by eliminating three items, q.1, q.15r and q.19r. Factor 2 loaded 11 items (see table 6.1) and was considered to describe positive elements of social support e.g. with some friends/ relatives I can really be at ease, and has been labelled 'positive social support' for further analysis. The cronbach alpha for this subscale was 0.88. Factor 3 loaded 6 items and included items such as 'when I am stressed tasks are taken off my hands' and was subsequently labelled 'expectations of others'. A substantial increase in cronbach alpha scores was found (0.35 to 0.75) when items 6r was eliminated. Factor 4 demonstrated a cronbach alpha with negative covariance. This is often due to recoding errors, small sample sizes or the items within the subscale not measuring the same thing (ref). In this case, it was evident that the scale items were not particularly related e.g. 'I wish more security/ closeness for myself' on the same item as 'I have someone I get on with sexually'. Consequently, this factor was excluded from further analysis. Factor 5 was considered suitable to the authors description of 'reciprocity' (see items in table 6.1) where the cronbach

Table 6.1 Factor loadings and communalities based on a principle components analysis with varimax rotation and all items loading ≥0.4 from the short version of the Social Support Questionnaire (SSQ) (N = 62)

Rotated Component Matrix[a]

	Component				
	1	2	3	4	5
Q1 There are people who accept me as I am	-.547	.597			
Q2 It is important for my friends/ acquaintances to hear my opinion on certain things		.405			
Q3 Some of my friends/ acquaintances exploit my helpfulness			.638		
Q4 I feel that important people reject me	.481		.499		
Q5 There are many situations when people ask me for practical help			.671		
Q7 Many of my friends/ relatives have a similar attitude to life as I have		.658			
Q8 I could love more freely if I didn't always have to think about my family/ friends	.679				
Q9 Sometimes I feel much better after a conversation		.599			
Q10 Sometimes when I am under stress tasks are taken off my hands			.642		
Q11 Sometimes I feel everybody has something to criticise about me	.630		.476		
Q12 I have someone I get on with sexually				.663	
Q13 Often I bump into acquaintances who I feel easy about having a chat with		.798			
Q14 I wish people didn't keep nagging me all the time	.683				
Q16 I can ask my friends/ acquaintances to help me filling in forms		.595			
Q17 With some friends/ relatives I can really be at ease		.759			
Q18 I feel my life is restricted by friends/ relatives	.755				
Q20 I am often asked for advice					.802
Q22 Often I think my friends/ relatives expect too much of me	.481			.410	
Q23 There are people who stand by me even when I make mistakes		.695			
Q24 My friends/ relatives don't take my feelings seriously	.604			.439	
Q25 There are people who always make me feel guilty	.652				
Q26 I have a very good relationship with enough people		.653			
Q27 There is a group of people (circle of friends) I feel part of		.759			
Q28 My friends/ relatives can't understand that I also need time to myself	.710				
Q29 There are people who are really happy in my company		.656			

Q30 There are people who turn to me with their personal problems					.729
Q31 Often I wish to stay somewhere that nobody knows me	.698				
Q32 Important people try to control my thoughts and actions	.776				
Q6r Most people I know get on better with their acquaintances than I do			-.643		
Q15r I often feel like an outsider	-.563				
Q19r I wish others would give me more sympathy and advice	-.438			-.627	
Q21r I wish more security and closeness for myself				-.644	

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

alpha for this subscale was 0.63. The final factor solutions for the short version of the SSQ used in the sample are presented in table 6.2.

Life Events Inventory (LEI) (Brown & Harris, 1989)

This 67 item questionnaire lists life events that may have occurred. The first 50 items are looking at life events specifically in the last 6 months with the following 17 items looking at the previous five years. Participants are required to tick a box indicating that, if one of the life events did occur, whether it had a good effect, a bad effect or both a good and bad effect. For events identified over the previous five years, the individual is asked to remember what year the even occurred in.

Adult Attachment Interview (AAI) (George, Kaplan & Main, 1985)

This is a structured interview of 18 questions used to assess an individual's state of mind with regard to their attachment figures. It is usually administered in one sitting and can last up to 90 minutes. Participants are asked to elaborate, with specific memories, on childhood relationships and experiences particularly in relation to their parents or primary attachment figures. Further questions enquire about their response to upset, separation, rejection, abuse or threatening behaviour. Participants are also asked why they believe their attachment figures behaved in the way they did during childhood and how this may influence them currently. Furthermore, questions are asked about any losses the participant has suffered from childhood through to the current day.

Table 6.2 Final factor solutions for this sample using the short version of the Social Support Questionnaire (SSQ) (N = 62)

Social Strain (α=0.91)
Q4 I feel that important people reject me
Q8 I could love more freely if I didn't always have to think about my family/ friends
Q11 Sometimes I feel everybody has something to criticise about me
Q14 I wish people didn't keep nagging me all the time
Q18 I feel my life is restricted by friends/ relatives
Q22 Often I think my friends/ relatives expect too much of me
Q24 My friends/ relatives don't take my feelings seriously
Q25 There are people who always make me feel guilty
Q28 My friends/ relatives can't understand that I also need time to myself
Q31 Often I wish to stay somewhere that nobody knows me
Q32 Important people try to control my thoughts and actions
Positive Social Support (α=0.88)
Q1 There are people who accept me as I am
Q2 It is important for my friends/ acquaintances to hear my opinion on certain things
Q7 Many of my friends/ relatives have a similar attitude to life as I have
Q9 Sometimes I feel much better after a conversation
Q13 Often I bump into acquaintances who I feel easy about having a chat with
Q16 I can ask my friends/ acquaintances to help me filling in forms
Q17 With some friends/ relatives I can really be at ease
Q23 There are people who stand by me even when I make mistakes
Q26 I have a very good relationship with enough people
Q27 There is a group of people (circle of friends) I feel part of
Q29 There are people who are really happy in my company
Expectations of Others (α=0.75)
Q3 Some of my friends/ acquaintances exploit my helpfulness
Q4 I feel that important people reject me
Q5 There are many situations when people ask me for practical help
Q10 Sometimes when I am under stress tasks are taken off my hands
Q11 Sometimes I feel everybody has something to criticise about me
Reciprocity (α=0.63)
Q20 I am often asked for advice
Q30 There are people who turn to me with their personal problems

To end the AAI, questions are asked about changes in the relationship with the parents since childhood and provide an opportunity for the participant to discuss their current relationship with their parents.

The AAI consists of 20 questions and probes allowing for categorisation of an adults 'state of mind' with regard to attachment style. It has been tested for stability and discriminant validity. Interview stability (measured by category allocation) at test retest interval of 2 months has been reported as 78% (kappa = .63) and 90% at 3 months.

Each AAI is transcribed verbatim and coded according to the guidelines stipulated by Main, Goldwyn and Hesse (version 7; 2002) and follows the four principles of Grice's Maxims

- quality, be truthful in what you say
- quantity, speak for an appropriate amount of time (e.g. neither too long or too short)
- be relevant, answer the question
- manner, be clear in what you are saying.

Categories for attachment states of mind fall under four domains; 'Secure', 'Dismissing-insecure', 'Preoccupied-insecure' and 'Unresolved'.

Reflective Function Scale (Fonagy, Target, Steele & Steele, 1998)
AAI transcripts provided the template to code reflective function (RF), the psychological process underpinning mentalization, utilising the coding framework of Fonagy, Target, Steele and Steele (1998). The coding is based on the narrative within the AAI and rates the awareness an individual has of the nature of mental states, the efforts they make to link mental states of the self and other to behaviour, the revisions they make of mental states in the interview and any recognition of mental states in relation to the interviewer. The scale score ranges from -1 (negative RF where reflective function is absent) to 9 (exceptional RF) and has been shown to demonstrate good inter rater reliability with coefficients ranging from 0.59 to 0.89 for the RF of mother and father AAI interviews from the London Parent-Child project where the scale was developed (Fonagy, Steele & Steele, 1991).

6.7 Administration of measures

After consent four meetings were arranged with the participant. The initial timetable was for a meeting a week but this was flexible depending on the needs of the participant and the

clinical team (e.g. sessions being moved closer together if the participant requested or deferred due to numerous appointments within the week).

6.7.1 Session 1 – Introduction, background and outcome

In this initial session, the aim was to ease the participant into the research and build a rapport with the author with the completion of two self report measures and demographic information. The self report measures were to assess the current level of functioning reported by the participant in terms of depression but also in terms of quality of life broken down into four domains; social, physical, environmental and psychological. Each measure was explained and the participant had the option to fill in the self report forms in the session or on their own over the following week.

1) *Demographic information*

   Designed by the author, this semi structured interview asks participants about their family and living situation, family history of mental health difficulties, social interactions and scholastic achievement. In addition, information was collected to investigate the participant's own understanding of their mental health difficulties, what impact they feel it has on their lives and what contact they have with mental health professionals. Approximately 30 minutes in length.

2) *Beck Depression Inventory Iife*

   Approximately 10 – 15 minutes in length.

3) *World Health Organisation Quality of Life Short Version*

   Approximately 10 – 15 minutes in length.

6.7.2 Session 2 – Interpersonal difficulties

This session was usually conducted a week after the first session and lasted for up to one hour. The main purpose, alongside continuing engagement, was to assess any difficulties the participant felt they had in terms of interpersonal interactions, emotion regulation and coping.

Initially the opportunity was provided for the participant to discuss the assessment measures from the previous session. The following measures were then completed:

1) *Inventory of interpersonal difficulties*
   Approximately 5 – 10 minutes in length.

2) *Adolescent Coping Scale*
   Approximately 10 – 15 minutes in length.

3) *The Regulation of Emotions Questionnaire*
   Approximately 10 – 15 minutes in length.

6.7.3 Session 3 – Social support

The aim of this third session was to investigate the social support the participant felt they had and whether this matched their expectations. Also in this session, recent life events were noted.

Again, participants were provided with the opportunity to discuss the assessment measures from the last meeting and then completed the following measures, where overall the session was not longer than 45 minutes in length:

1) *Significant Others Scale*
   Approximately 10 – 15 minutes in length although dependent on the number of significant others identified.

2) *Social Support Questionnaire*
   Approximately 10 – 15 minutes in length.

3) *Life Events Inventory*
   Approximately 5 minutes in length.

6.7.4 Session 4 – Adult Attachment Interview

This final session was to conduct the adult attachment interview. Participants were provided the opportunity to discuss measures from the previous session and then the interview began.

1) *Adult Attachment Interview (AAI)*
   - This measure is dependent on an individual discussing their childhood experiences. As the information for this period is regarded as stable it was felt that this assessment could be conducted up to 3 months after initial participation, potentially giving the participant a period of time to recover from their initial presentation.
   - Approximately up to 1 ½ hours in length with interview required to be conducted, as far as possible in one session. If the participant requested a break this was accommodated. Only one participant requested a break and the interview was completed two days later.
   - Studies using the AAI in non-clinical populations have sometimes found that the interview primes memories of experiences which participants' then wish to discuss further, either with a researcher or a clinical professional.
   - Secondly, the topics covered in the interview are such that recollection of memories related to these topics may be distressing to an interviewee. In view of the current study population, it was good practice to have a mechanism in place for immediate contact with a key worker if necessary and deemed prudent to conduct the interviews at the participants clinical base.
   - For practical purposes, when conducting the AAI interview, water and paper tissues were available in the interview room. Prior to commencing the interview, the participant was made aware that they could stop the interview at any time, either for a break, or to end the interview at that point.

6.7.4.1 Transcribing and coding the AAI

Each AAI was conducted and ranged from 15 to 70 minutes in length. Once recorded each interview was transcribed verbatim and all names and places were annonymised. This process took from 3 to 8 hours. Following transcription coding could commence.

All interviews were coded for AAI categorisation and on average took approximately 3 hours each. Training for coding was completed in London, Ontario in July 2007 and the author has been certified reliable in 3 way coding (see appendix 4).

6.8 Settings and Equipment

Sessions were conducted either at CAMHS, Lothian or at the participant's local NHS building (e.g. GP surgery). This ensured that the individual could access their key worker after the interview to discuss any issues that may have been raised by any of the measures. Prior to commencing this final session (with the AAI) the participant was made aware that they could stop the interview at any time, either for a break, or to end the interview at that point.

The AAI was conducted using a digital recording device (Sony ICD SX35). The recording was then transcribed and annonymised and made ready for coding. The original recording was then erased to maintain confidentiality.

6.9 Feedback to participants

Participants were offered the opportunity of receiving feedback after they had completed the research measures. To deliver feedback, the researcher accompanied the key worker on their next visit to the participant. Participants were given the choice as to whether they wished their key worker to hear their feedback report. The participants were also given the opportunity to raise any concerns they might have about the measures or feedback process.

6.10 Feedback to clinical teams

If the participant gave their consent, or made a spontaneous request, a feedback report of the self report measures was completed and made available to the clinical team and clinical note. In addition, the attachment states of mind of the young person and their score on reflective function was coded and reported back to the clinical team. This information was used to inform the clinical team and to aid the formulation, assessment and intervention of the participants and potentially help them develop a staying well plan with participants.

Section 3

Results and analysis

Results and analysis

7.0 Introduction

The following chapter will present a demographic picture of the sample and will be separated into four parts. Part I will focus on describing the participants. Part II of this section will focus on the interpersonal and clinical characteristics of the sample using evidence from both the self report questionnaires and the Adult Attachment Interview. Part III will examine any differences in the presentation of the participants by according to service and diagnosis and Part IV will focus on addressing the hypotheses of this study.

7.1 Data analysis

Data analysis was conducted using PASW 18. All data was assessed for distribution using the Shapiro-Wilk Test (see appendix 5). Where distribution was normal parametric methods of analysis were utilised where appropriate including t-tests, ANOVA and Pearson's r correlation. Where data was not normally distributed non parametric tests were used including Mann Whitney, Wilcoxon, Kruskal Wallis and Spearman's rho correlation. Chi square analysis was employed for the categorical variables. The data was explored utilising structural equation modelling (SEM) using MPlus 5.21 (Muthén & Muthén, 2009) statistical programme.

7.1.1 Data interpretation

Throughout this section it should be kept in mind that whilst this sample is one of the largest of its kind, it is relatively small for statistical analysis and will be underpowered. Therefore, results and intereptations should be considered cautiously.

7.2 Hypotheses

From the literature review the following questions were asked of this data:

1) Does attachment and reflective function directly and indirectly predict psychological adaptation to mental health difficulties as the literature suggests?
2) Do emotion regulation, interpersonal difficulties and social support fully mediate the effects of attachment and reflective function?

Specific hypotheses were proposed as:

1) Attachment and mentalization will be associated with developmental psychopathology with a majority of insecure attachment styles and poor reflective function shown in the sample.
2) Attachment and mentalization will be associated with an individual's psychological adaptation and mood when experiencing a mental health difficulty. This relationship will be mediated by the underlying mechanism of emotion regulation.
3) Interpersonal difficulties will be associated with insecure attachment styles or poor reflective function and will be negatively associated with psychological adaptation and mood.
4) Perceptions of social support will be associated with low mood and the psychological adaptation of the individual. Perception of support will be predicted by attachment style and levels of reflective function.

Part I – The participants

7.3 Demographic information

A total of 73 participants (23 males and 50 females) took part in the research completing the psychological measures and 60 of these completed the Adult Attachment Interview. The age at entry into the study was not normally distributed ($w = 0.995$, $p = 0.011$) and the median age was 16 (range 13 – 20) with no significant difference found between gender ($U = 422.00$, $p = 0.064$). Of the sample, 98.6% described themselves as being of 'White-British' ethnicity. Eleven (15.1%) participants felt they had general physical health concerns that impacted on their life (e.g. asthma).

7.3.1 Living arrangements

The majority of the sample were living with their parents and/ or siblings (n=65, 89%), with just five participants living on their own (6.8%) and three (4.1%) living with extended family.

7.3.2 Education

Given that this is an adolescent sample the majority of participants were still in education. The majority were in school (n=50, 68.5%), five (8.2%) were in college and two (2.7%) were at university. A fifth of the sample had left school (n=15, 20.6%) with nine (12.3% of total sample) of those in employment and six (8.3% of total sample) unemployed.

7.3.3 Insight

Almost a quarter of the sample (n=17, 23.3%) did not believe they had a mental health difficulty and four (5.5%) did not know. When considering these individuals who did not believe they had a mental health difficulty or who were unsure, 14 (63.6%) out of the 21 had been admitted to hospital for their illness. Level of insight was not significantly related to length of illness duration, number of hospital stays or if the participant was taking medication. It was also not related to whether an individual felt their mental health difficulties were causing disruption to their life or got in the way of what they wanted to do. There was, however, a significant effect of insight on whether the individual perceived their difficulties as continuous or not ($\chi^2 = 24.094$, 2, $p<0.001$). Those who did not believe they had any mental health problems did not perceive their problems to be continuous.

7.3.4 Beliefs about mental health difficulties

In this group of adolescents, 37 (51.4%) individuals reported that their mental health difficulty disrupted their life a lot, 39 (54.2%) felt that it frequently got in the way of what they felt able to do and 61 (84.7%) young people felt that their illness had been a continual difficulty from the beginning. Just less than half of the participants (n=34, 46.6%) had experienced difficulties for less than one year with the most frequent length of time being 6 to 12 months. However, 14 (19.2%) individuals had experienced difficulties for 1 to 2 years and 25 (34.2%) young people had experienced mental health difficulties for 2 years or more. The longest recorded experience of a mental health difficulty in this sample was between 6 and 7 years. Over half of the total sample had been admitted to hospital for their current illness (n=51, 69.9%) and just under half of the sample (n=32,43.8%), were taking medication for their mental health difficulties.

7.3.5 Gender and age effects

There were no significant effects of age or gender on any of the demographic or clinical variables with the exception of the question 'How much does this (mental health difficulty) disrupt daily life' ($\chi^2(3, N=72)=9.453$, $p=0.024$) with females reporting a larger disruption to their daily life.

7.4 Family mental health

Forty seven (64.4%) of the participants had at least one relative who experienced mental health difficulties with 29 (39.7%) of those identifying this relative as at least one parent with a mental health difficulty. In 89.7% of the cases, this was the mother. Three (4.1%) participants reported both parents experiencing mental health difficulties.

7.5 Social network characteristics of the sample

Participants identified a social network with a median of eight friends (range 0 – 30). When asked how many of these friends were 'close' friends, where there was regular contact defined as at least weekly contact, the median number was four (range 0 – 15). Reflecting a measure of social isolation within the sample, twelve (16.4%) participants reported having no friends either as acquaintances or as close confidents.

The measure of support received from friends and family was measured using the *Social Support Questionnaire (F-SOZU)* (Sommer & Fydrich, 1991) and the *Significant Others Scale (SOS)* (Power, Champion & Aris,1988).

7.5.1 Social support

Taking the social support questionnaire first, the subscales of this measure were redesigned for this sample using factor analysis (see methods section 6.6) and were labelled as follows; 'Social Strain' measuring the level of perceived difficulties existing in social relationships, 'Positive social support' measuring the perceived levels of positive support received from social networks, 'Expectations of others' defined to be where expectations from others are perceived to be negative and overwhelming and 'Reciprocity' measuring if the individual feels they can contribute and help others within their social network. The first two of these subscales had normal distributions but the latter two did not. Mean and median scores were as follows: social strain, $\bar{x} = 2.78$ (sd±1.03), positive social support, $\bar{x} = 3.42$ (sd±0.82), expectations of others, median = 2.9 (range 1 – 4.80) and reciprocity, median = 3.50 (1 – 5).

Age, attachment classification and reflective function had no effect on this social support measurement. There was, however, an effect of gender where females rated higher levels of reciprocity in their social relationships than males (U=582.5, N=62, p=0.013).

7.5.2 Significant Others

The SOS can be rated for up to six individuals in the participant's social network with the first three always being a partner (if applicable), a close relative and a close friend. In this sample, 86.2% identified their close relative as a parent. The final three identified in the individuals social network are specified by the participant. The questionnaire demands the individual rate answers according to the emotional and practical support they receive. Emotional support is considered to be talking to, sharing feelings, leaning on the individual at times of difficulty and receiving physical comfort whereas practical support is considered to be pragmatic help and spending time socially with that individual.

There are six subscales to the SOS and consist of the following; the 'actual' emotional support the participant perceives they get from the individual in question and their 'ideal' level of emotional support, the 'actual' level of practical support they believe they receive and their 'ideal' level of practical support. The last two subscales measure the level of discrepancy between what an individual ideally wants and what they receive for both emotion and practical support.

The significant others scale demonstrated non normal distribution across all the overall subscales with the exception of 'actual practical support' received (w = 0.983, p = 0.499).

For support received from a partner, close relative and close friend, distribution was more varied and the corresponding mean and median scores are displayed in table 7.1 with their standard deviation or range. There was no significant difference on subscale scores across partner, close relative and close friend. These scores are similar to those found by Neeleman and Power (1994) where emotional discrepancy scores ranged from 0.9 to 1.5 across three psychiatric groups experiencing deliberate self harm, depression and psychosis and practical help discrepancies ranged from 0.8 to 1.1. In addition, the received and ideal scores for both emotional and practical help in this sample were also similar to those previously reported for clinical groups (Power, Champion & Aris, 1988).

There was no significant effect on SOS scores from age, attachment classification or reflective function. There were, however, a number of significant effects of gender and if at least one parent had a mental health difficulty. Beginning with gender, for overall support from others a significant pattern emerged with females rating both higher levels of emotional and overall support than males ($U=665.5$, $N=65$, $p=0.001$ and $U=651.5$, $N=65$, $p=0.002$ respectively) and also higher levels of ideal practical support ($u=610.5$, $N=65$, $p=0.012$). When looking at specific individuals providing support, females rated higher ideal levels of practical support from their close relative than males ($U=583.5$, $N=65$, $p=0.026$) and also higher levels of discrepancy for emotional and overall levels of support with their close relative ($U=673$, $N=65$, $p<0.001$ and $U=629.5$, $N=65$, $p=005$ respectively). When rating the support they receive from a close friend, females rated higher levels of ideal emotion support than males ($U=515$, $N=61$, $p=0.041$) and also higher levels of discrepancy between the emotional support they receive and what they consider to be ideal ($U=514$, $N=61$, $p=0.038$).

Table 7.1 Mean and median scores for the SOS subscales

Function of social support	Total network	Close relative	Partner	Close friend
Actual emotional support	**5 (1.5 – 7)**	x̄ = 5.10 (1.40)	5.33 (2.67 -6.33)	x̄ = 4.77 (1.20)
Ideal emotional support	**6.1 (1.33 – 7)**	x̄ = 6.05 (0.86)	x̄ = 6.26 (0.72)	x̄ = 5.44 (1.14)
Discrepancy: Emotional Support	**0.83 (0 – 2.67)**	0.33 (0 - 2.67)	x̄ = 1.00 (0.75)	x̄ = 0.67 (0.58)
Actual Practical support	**x̄ = 5.04 (0.98)**	5 (3 - 6)	x̄ = 4.81 (0.95)	x̄ = 5.27 (0.75)
Ideal Practical support	**6 (2.25 – 7)**	5 (1 - 7)	6.5 (3.5 - 7)	x̄ = 6.08 (0.67)
Discrepancy: Practical Support	**0.75 (0 – 2.25)**	0.5 (0 – 2.5)	x̄ = 1.15 (0.72)	x̄ = 0.88 (0.65)
Total Discrepancy	**1.72 (0 – 3.61)**	0.83 (0 – 5.17)	x̄ = 2.15 (1.28)	1.55 (0.95)

Interestingly, for young people who had at least one parent experiencing mental health difficulties there was a significant effect on their ratings for the practical support received and expected from their close relative (bearing in mind 86.2% identified a parent for this category). These individuals rated significantly lower actual (U=312.5, N=65, p=0.008) and ideal practical support (U=321, N=65, p=0.009) from their close relative than those whose parents did not have a mental health difficulty.

7.6 Summary of the sample characteristics

The details above describe a sample of adolescents where the majority are currently experiencing distress and disruption that they associate with their mental health difficulty. Of note, over two thirds of this sample report having at least one parent currently experiencing

mental health difficulties. This section also shows a large portion (over a quarter) of individuals who do not believe they have a mental health difficulty which has resulted in over two thirds of this group being admitted to hospital.

Social networks appear relatively limited when considering close friendships but a little larger when considering all acquaintances. Females have significantly higher overall expectation of social support than males, specifically from close relatives and friends. This perhaps is why they also score significantly higher than males when rating the discrepancy between the actual support received compared to the desired levels.

Part II Interpersonal and clinical characteristics

7.7 Interpersonal characteristics

The *Inventory of Interpersonal Problems (IIP-32)* (Horrowitz, Alden, Wiggins & Pincus, 2000) was used to assess interpersonal difficulties experienced within the sample and is broken down into eight subscales with an overall total score. The subscales are; domineering/ controlling, vindictive/ self centred, cold/ distant, socially inhibited, non assertive, overly accommodating, self sacrificing and intrusive/ needy.

The Shapiro-Wilk Test demonstrated that all the subscales were not normally distributed with the exception of the overly accommodating and IIP-32 total score. There were no differences in mean scores across gender and age had no effect. The mean/ median scores are reported in table 7.2 below.

Table 7.2 Mean/ median scores for the IIP – 32 total and subscale scores

IIP 32 Subscale	Mean/ median	SD/ range
Domineering/ controlling	Median = 3	0-14
Vindictive/ self centred	Median = 3	0-15
Cold/ distant	Median = 4	0-14
Socially inhibited	Median = 5	0-16
Non assertive	Median = 7	0-16
Overly accommodating	$\bar{x}$ = 6.59	3.90
Self sacrificing	Median = 6	0-15
Intrusive/ needy	Median = 3	0-13
IIP total	$\bar{x}$ = 41.97	19.68

The overall total, when transformed according to the scoring manual, is representative of a t score of 58 where the normal range is 40 – 60. This indicates that the sample has a high level of overall interpersonal difficulties although this does not reach significance. The median score of 7 for the subscale of 'non assertive' indicates this is an area of particular difficulty for this sample. This subscales describes individuals as trying to avoid situations that involve social challenges including being firm with others, taking the initiative or receiving attention. The authors of this measure suggest this subscale captures the fragility of the individual's

self esteem where they try to avoid making their wishes or beliefs known in case they receive disapproval or rejection from others (Horowitz, Alden, Wiggins & Pincus, 2000).

7.8 Emotion regulation

To investigate the emotion regulation strategies employed by the sample the *Regulation of Emotions Questionnaire (REQ 2)* (Phillips & Power, 2007) was used which has four subscales namely internal-function ($\bar{x}$ = 8.70, sd ± 4.33), internal-dysfunction ($\bar{x}$ = 8.09, sd ± 3.32), external-function (median = 8, range 1-17) and external dysfunction (median = 2, range 0-11). The two subscales measuring external emotion regulation strategies were not normally distributed (w = 0.962, p = 0.048 and w = 0.893, p<0.001 respectively). Again, no age and gender effects were observed.

When comparing the subscale scores of this sample to the sample the questionnaire was developed on (n=225 cross sectional adolescents aged 12 to 19 from the 'normal' population) large effect sizes (table 7.3) were found with the clinical sample scoring significantly higher across all subscales.

Table 7.3 Effect size for regulation of emotions questionnaire subscales

REQ2 subscale	Effect size (Cohen's d)
Internal dysfunction	8.59
Internal function	9.44
External dysfunction	2.98
External function	7.60

A number of social support variables were significantly associated with the emotion regulation subscales. Beginning with the dysfunctional emotion regulation strategies, correlating with the internal dysfunction subscale was overall discrepancy between actual and received practical support (rho= 0.324, p=0.012) and overall support (rho=0.345, p=0.008). In addition, when analysis investigated specific individuals within support networks the discrepancy of support received from close relatives, the majority of which were parents, was also significantly associated with internal dysfunction emotion regulation strategies. This was for practical support (rho=0.285, p=0.028), emotional support

(rho=0.334, p=0.010) and overall support (rho=0.354, p=0.006). In terms of external dysregulation strategies, practical support received was correlated to the scale (rho=-0.256, p=0.050) where the lower level of practical support received, the higher the levels of externally dysfunctional emotion regulation strategies. Essentially, individuals who report using dysfunctional emotion regulation strategies are reporting higher levels of discrepancy and lower levels of perceived support.

For the functional emotion regulation strategies, internal function strategies were associated with the actual (rho=0.347, p=0.009) and ideal (rho=0.278, p=0.040) emotional support received from close friends. Externally functional emotion regulation strategies were significantly correlated to overall levels of emotional (rho=0.509, p=0.004) and practical (rho=0.360, p=0.005) support perceived by the individual. This was also the case when specifically reporting the support received by close relatives (emotional rho=0.573, p<0.001, practical rho=0.343, p=0.008) and friends (emotional rho=0.279, p=0.039, practical rho=0.289, p=0.032). Those participants reporting using functional emotion regulation strategies report higher levels of perceived overall support.

7.9 Coping

The *Adolescent Coping Scale (ACS)* (Frydenberg & Lewis 1993) was utilized to investigate the coping style of the sample and addressed both general coping and coping employed for a specific problem identified by the individual. The ACS is divided into three subscales which were assessed for distribution and are outlined in table 7.4 with the corresponding mean/ median scores.

All of these scores fell within the 'normal' range of coping. A paired sample t-test was employed to investigate any differences an individual might have when coping with specific compared to general problem solving. A significant difference was found for the subscale of problems solving where participants indicated higher scores for general compared to specific problem solving (t=4.04, df = 46, p<0.001). It was also observed that participants rated higher scores for non productive coping strategies when considering their general problems in comparison to their specific concerns (z = -2.23, n = 40, p = 0.026). This suggests that whilst participants use problems solving more when thinking about their general worries compared to their specific concerns, they also use more non productive coping strategies.

Table 7.4 Mean/ median scores for the ACS for general and specific coping

Adolescent Coping subscales	General Coping x̄ / median (SD/ range)	Specific Coping (x̄ / sd)
Problem Solving	x̄ = 18.49 (0.68)	x̄ = 16.74 (0.80)
Reference to Other	Med = 9 (4 – 17)	x̄ = 9.94 (0.50)
Non Productive Coping	Med = 31 (12-65)	x̄ = 27 (0.94)

7.10 Clinical characteristics

To assess the perceived quality of life of the participants and their adaptation to their situation, the *World Health Organisation Quality of Life (short version) (WHOQOL BREF)* (World Health Organisation, 1998) was administered as was the *Beck Depression Inventory II (BDI-II)* (Beck, Steer & Brown, 1996) to assess mood.

7.10.1 Quality of life

Psychological quality of life was the only WHOQOL subscale not normally distributed (w = 0.958, p = 0.028). The mean or median WHOQOL BREF subscale scores were as follows; physical quality of life x̄ = 46.92 (sd ± 16.08), psychological quality of life median = 41.67 (range 16.67 – 83.33), social quality of life x̄ = 54.74 (sd ± 23.34) and environmental quality of life x̄ = 60.10 (sd ± 18.49). These scores reflect that participants were most satisfied with the quality of their environment followed by the quality of their social relationships. They rated their satisfaction with their psychological quality of life lowest. Interestingly, the WHOQOL BREF subscales correlate with each other demonstrating the interaction of all four areas within quality of life, that is, one facet of quality of life is likely to impact on another.

When exploring quality of life in relation to social support, a number of significant results were found. Table 7.5 presents the significant associations between quality of life and the discrepancies reported in perceived social support.

Table 7.5 Spearman's rank correlation coefficients for the WHOQOL BREF subscales and discrepancies in perceived social support.

	WHOQOL BREF Physical	WHOQOL BREF Psychological	WHOQOL BREF Social	WHOQOL BREF Environment
Overall discrepancies in emotional support	n.s	-0.406**	n.s	-0.339*
Overall discrepancies in practical support	n.s	-0.375*	n.s	-0.293*
Overall discrepancy in social support	n.s	-0.461**	n.s	-0.392*
Discrepancy in emotional support from close relative	-0.280*	-0.495**	-0.321*	-0.468**

n.s = not significant

* significant at $p<0.05$, ** $p\leq0.001$

Lower perceived psychological and environmental quality of life was associated with discrepancies in emotional, practical and overall support received from the entire social network.

Of note is that the discrepancy in emotional support from a close relative was significantly associated with all four domains of the quality of life scale. This demonstrates worse adaptation in those who rated they received less than their ideal amount of social support from their close relative.

7.10.2 Depression scores

The BDI II was not normally distributed ($w = 0.951$, $p=0.011$). The median score on the BDI was 25 (range 0-57) indicating a 'moderate' level of depression within the sample (category range 20 – 28).

In addition, the BDI II had significant negative correlations with all the WHOQOL BREF subscales at $p<0.01$ level (physical rho = -0.515, psychological rho = -0.870, social rho = -0.444, environmental rho = -0.560). Whilst it may not be surprising that higher depression scores are associated with lower satisfaction with quality of life, the strength of association particularly in the psychological quality of life domain is noteworthy.

Also significantly correlated to low mood was social support where higher reported discrepancies between actual and ideal emotional and practical support correlated to higher levels of depression (rho=0.397, p=0.002). This was also replicated when considering close relatives as sources of emotional and practical support where discrepancies were also significantly associated with higher levels of depression (rho=0.440, p<0.001).

7.10.3 Distribution of Adult Attachment Interview Classification

As previously discussed, AAI analysis can be broken down into 2,3,4 and 5 way analysis. Every individual is assigned an 'organised' strategy of attachment which could be secure (F), insecure/dismissing (Ds) or insecure/ preoccupied (E). For 2 way analysis, the two insecure categories are collapsed together so that analysis is carried out on secure vs insecure attachment classification. For three way analysis, the attachment classifications are left as F, Ds and E.

For four way analysis, an individual can be deemed as 'disorganised' with respect to loss or trauma and are classified 'unresolved' thus receiving a U classification. Theory suggests that this disorganisation may only be temporary (George et al., 1996) so in addition to U, the individual is also assigned the best fitting 'organised' classification shown in the rest of the narrative e.g. U/F. For four way analysis participants can be labelled as F, Ds, E and U so a participant with a U/F would be categorised as U in four way analysis but in three way analysis, would be classified as F.

A final way to analyse AAI data sees the introduction of the 'Cannot Classify' category (CC) that represents a breakdown in an individual's global attachment strategy where there are now 5 labels for coding; F, Ds, E, U and CC. Similar to the previous example, where an individual is classified as CC there is always a secondary 'organised' classification (e.g. CC/Ds). For this example, in 5 way analysis the participant would be in the CC classification but for 3 way analysis they would be in Ds.

The distribution of attachment classification, measured by the AAI (George, Kaplan & Main, 1985), is presented in table 7.6.

Table 7.6 Adult Attachment Classification (n=60)

AAI Category	2 way (n/%)	3 way (n/%)	4 way (n/%)	5 way (n/%)
Secure (F)	17 (23.3)	17 (23.2)	13 (21.7)	13 (21.7)
Insecure: Dismissing (Ds)	Insecure (combined)	38 (63.3)	36 (60)	34 (56.7)
Insecure: Preoccupied (E)	43 (71.7)	5 (8.3)	3 (5.0)	3 (5.0)
Unresolved (U)			8 (13.3)	7 (11.7)
Cannot Classify (CC)				3 (5.0)

When comparing AAI classification there were significant differences in gender for two way analysis; secure/ insecure (χ^2=6.570, df = 1, p=0.01) where less males and more females than expected were classified as secure. This gender difference extended into three way analysis; secure/ dismissing/ preoccupied (χ^2 = 6.571, df = 2, p=0.037) where not only were there less males and more females rated as secure than expected, more males and less females were rated as dismissing. There were no differences for the preoccupied classification. No gender differences existed in 4 way and 5 way analysis.

The over representation of insecure attachment classification is similar to that found in adult clinical samples (e.g. Bakermans-Kranenberg & van IJzendoorn, 2009; Broberg, 2001; Fonagy et al., 1996). The majority representation of insecure/ dismissing is comparable to the results found in non clinical adolescent samples in empirical work (e.g. Ammanati et al., 2000) and meta-analyses (e.g. Bakermans-Kranenberg & van IJzendoorn, 2009a) and clinical adult samples (e.g. Fonagy et al., 1996).

There was a significant difference in the AAI classification of individuals with parents who had mental health problems in comparison to those who did not (χ^2 =7.162, df=2, p=0.028). Notably all those classified as insecure/ preoccupied had at least one parent with mental health difficulties. In terms of beliefs about their own mental health, individuals who did not believe they had mental health difficulties were significantly more likely to have an insecure/ dismissing attachment style (χ^2 =16.639, df=4, p=0.002).

7.11 AAI and clinical characteristics

Surprisingly, AAI classification was not associated with any of the clinical correlates of emotion regulation scores, quality of life, depression scores or coping in either two way (e.g. secure/ insecure) or three way (e.g. secure/ autonomous, insecure/ dismissing and insecure/ preoccupied) analysis.

For interpersonal difficulties, 3 way attachment classification had a significant effect on the self sacrificing (χ^2=7.843, df = 2, p=0.020) and intrusive/ needy (χ^2=8.532, df = 2, p=0.014) subscales where a preoccupied attachment style had higher ranking with self sacrificing and a secure attachment with the intrusive/ needy subscale.

7.11.1 'Coherence of transcript'

Coherence of transcript is a score assigned to each AAI transcript and is representative of the coherence of narrative demonstrated by the speaker and forms the basis for final attachment classification. Scores can range from -1 where there is no coherence to the narrative and the individual speaks in confusing or contradictory ways violating the Gricean maxims of language, to 9 where the speaker demonstrates high levels of coherence and is fully cooperative with the interview according to Grice's maxims. The higher the level of coherence, the more likely the individual will be classified as having a secure attachment style. In this sample, the coherence of transcript scores were not normally distributed (w=0.866, p<0.001). The median score was 3, representing a narrative lacking in coherence, and ranged from 1 to 7.5 (with the possible range of -1 to 9).

Using coherence of transcript as a continuous, rather than categorical, representation of attachment, its possible associations with clinical, social and interpersonal correlates were examined. A number of these demonstrated significant correlation with coherence of transcript and are presented in table 7.7.

Of note, the higher the coherence of transcript score the lower the rating for psychological quality of life and the emotional support received from close friends. Also, the more coherent the narrative the higher an individual rated their levels of depression and use odf internally dysfunction emotion regulation strategies.

These results suggest, in contrast to the literature, there is worse adaptation to mental health difficulties in those who are more able to likely to be coded as secure on the AAI, a coding made on the consistency of narrative regarding their childhood experiences.

Table 7.7 Clinical and interpersonal correlates associated with coherence of transcript

Clinical measure	Spearman's rho	P value
IIP 32 – Vindictive/ self centred subscale	-0.273	0.038
IIP 32 – Self sacrificing subscale	0.288	0.028
IIP 32 – Intrusive/ Needy subscale	0.365	0.005
Psychological quality of life	-0.347	0.011
Beck Depression scale	0.329	0.015
REQ Internally dysfunctional emotion regulation	0.380	0.005
F-SOZU Social strain subscale	0.282	0.045
SOS Emotional support received from close relatives	-0.346	0.008
SOS Discrepancy in practical help from close relative	.617	0.032

7.11.2 Loss and trauma measured by the AAI

Fifteen (20.5%) of the sample had experienced trauma as defined by the adult attachment classification system which includes emotional, physical or sexual abuse by an attachment figure. Forty four (60.3%) had suffered the loss of a close loved one in their lifetime and thirteen (21.3%) had experienced both loss and trauma. The overall score for trauma was not normally distributed ($w=0.757$, $p<0.001$) and had a median of 1.5 and ranged from 1 to 8.5. A score above 5 would result in primary placement into the unresolved category for attachment. The low score of 1.5 suggests a population that whilst the majority have experienced loss and/ or abuse, their ability to describe these experience results in a collaborative and consistent narrative.

7.12 Reflective function scores measured from the AAI

The scores for reflective function (RF) (Fonagy, Target, Steele & Steele, 1998) were not normally distributed (w=0.938, p=0.005). The median RF score was 3 and ranged from -1 to 7. The score of 3 is representative of a 'questionable' level of reflective functioning (Fonagy et al., 1998) where the individual rarely demonstrates an understanding of their mental state and those of others. They may occasionally show some reflective function but on a superficial level and inconsistent basis. This score reflects a similar level of reflective functioning found in adult mental health samples where Fonagy et al., (1996) reported a mean score of 3.7 (sd±1.8) in psychiatric inpatients, and Macbeth et al., (2011) found a median of 3 (range 0 to 7) in a first episode psychosis sample. No significant effects were found for age or gender and no associations were found with any of the clinical measures used except for physical quality of life (rho = 0.282, p = 0.016).

It has been hypothesised that a secure attachment style fosters the development of mentalizing skills so the reflective function scores across the AAI categories were compared for analysis. There was a significant effect of attachment on RF scores (χ^2=6.853, df = 2, p=0.033) where the median score for a secure attachment is 5 (range 1 to 7), for insecure/ dismissing the median is 3 (range -1 to 6) and for insecure/ preoccupied attachment the median was also 3 (range 1 to 7). RF scores were also significantly correlated with coherence of transcript scores (rho = 0.509, p<0.001).

In terms of social relationships, RF scores were correlated to the number of friends (rho = 0.40, p = 0.002) and number of close friends (rho = 0.299, p=0.020). Interestingly, there was a negative correlation between RF and the amount of overall practical help received by a young person (rho = -0.315, p=0.016) suggesting that the more able the individual was to think about the mental states of themselves and others, the less practical help they reported to receive.

7.13 Summary of interpersonal and clinical characteristics

The descriptive data above presents a clinical picture of adolescents with 'moderate' levels of depression, interpersonal difficulties and a strong likelihood to demonstrate an insecure/ dismissing attachment style. The attachment style of the sample is largely insecure in their attachment with the insecure/ dismissing category having the largest membership. The overall level of reflective ability in the sample is 'questionable' and when the participants

were concerned about specific worries they reported they were more likely to utilise maladaptive coping strategies.

Functional emotion regulation strategies were associated with more perceived social support whereas dysfunctional strategies demonstrated significant association with higher levels of discrepancy between the actual and ideal levels of support. Poorer quality of life and higher levels of depression were also associated with a lack of perceived support.

Part III – Participants examined according to service and diagnosis

7.14 Sample characteristics by service

Due to the differing nature of the tier IV services where recruitment was based, an additional section was felt necessary to explore any potential differences between the adolescents in each service. To recap, the tier IV services are as follows; An Early Psychosis Support Service (EPSS), A Day Programme and an adolescent inpatient unit.

EPSS is the only early intervention service in Scotland for psychosis in adolescence. The team accept referrals from the age of 13 up to the 19th birthday of an individual. It provides an assertive outreach programme that includes at least weekly visits from their individual's Community Psychiatric Nurse (CPN) and a weekly group programme to facilitate social skills. EPSS also offers Behavioural Family Therapy (BFT) to all families within the service. This is approximately a 16 week course of therapy focusing on and developing the communication skills within the family and, if agreeable, the young person is encouraged to share their understanding of their difficulties with the family. In addition, weekly psychological and occupational therapy appointments are offered when a young person is able to engage in therapeutic activities.

The Day programme is a service for 13 to 18 year olds who require a more intense input than tier III services can provide. All mental health difficulties are accepted with the exception of individual's experiencing a psychotic illness. The service focuses on group therapy and offers three groups a week: one is for recreational activities, one facilitates the group talking about their difficulties and the third has a focus on using artistic techniques to encourage expression within the young person. CPN sessions are offered in addition to psychology occupational therapy. BFT is also offered within this service.

The inpatient unit is an adolescent ward that accepts referrals for young people aged between 13 and 18 who are suffering with a mental health difficulty and where they can no longer manage the community. All mental health difficulties are accepted in the unit and they run a twice weekly group programme (with a creative or recreational focus), offer BFT, occupational therapy and psychological intervention. Assisting young people to return to the community is of highest importance.

7.14.1 Clinical and interpersonal characteristics by service

Clinical and interpersonal characteristics were investigated using Kruskal Wallis analysis and there were no significant differences across the services for interpersonal difficulties or coping. Nor were there any significant differences between individual's in differing services for trauma scores, attachment classification (2, 3, 4 and 5 way), coherence of transcript scores or reflective function scores. The distribution of attachment classification by service is provided for information purposes and can be seen in table 7.8.

Table 7.8 Adult Attachment Classification by service (n=60)

AAI Category	Service	3 way (n/% within service)	4 way (n/% within service)	5 way (n/% within service)
Secure	Day Programme	4 (50.0)	3 (37.5)	3 (37.5)
	EPSS	4 (22.2)	4 (22.2)	4 (22.2)
	IPU	9 (26.5)	6 (17.6)	6 (17.6)
Insecure: Dismissing	Day Programme	4 (50.0)	4 (50.0)	4 (50.0)
	EPSS	13 (72.2)	11 (61.1)	11 (61.1)
	IPU	21 (61.8)	21 (61.8)	19 (55.9)
Insecure: Preoccupied	Day Programme	0	0	0
	EPSS	1 (5.6)	0	0
	IPU	4 (11.8)	3 (8.8)	3 (8.8)
Unresolved	Day Programme		1 (12.5)	1 (12.5)
	EPSS		3 (16.7)	3 (16.7)
	IPU		4 (11.8)	3 (8.8)
Cannot Classify	Day Programme			0
	EPSS			0
	IPU			3 (8.8)

Although no significant differences were found between the services, it should be noted that the majority of both inpatient unit and EPSS participants had insecure/ dismissing attachment classification whereas the Day programme had an even split between secure and insecure/ dismissing albeit a smaller sample. Also of interest, is that when considering 4 way

analysis where those who are predominantly unresolved with respect to loss and trauma, all three services have a similar percentage of participants coded as unresolved. Finally, those who were coded 'cannot classify' in the 5 way analysis, where their narrative was deemed highly incoherent or contradictory, were all inpatients at the time of the study.

A trend was noticed across the service where coherence of transcript and reflective function scores of individuals from the day programme were higher than those from the inpatient unit or EPSS (see table 7.9 below). Indeed, in terms of reflective function, the median score of 5 recorded with the adolescents in the day programme is indicative of 'ordinary' levels of mentalization. In comparison, the median score of 3 in both the inpatient and EPSS groups is considered to demonstrate a lack of reflective function. This is where participants may have labelled mental states of themselves and others in the AAI but not elaborated on them or demonstrated an understanding of what they mean.

Table 7.9 Coherence of transcript mind and reflective function scores from the AAI by service

Service	Coherence of transcript score	Reflective function score
Day Programme	5.0	5.0
EPSS	2.0	3.0
In patient unit	3.0	3.0

There were, however, a number of significant results demonstrating differences between services for other clinical correlates. Significant results emerged between the services for depression, the subscales of internally dysfunctional and internally functional emotion regulation strategies and both psychological and social quality of life.

There was a significant difference in BDI scores across the three services ((χ^2=11.68, df = 2, p=0.003). Tamhane T2 test of post hoc differences indicated significant differences between the EPSS and inpatient unit participants with individual's in EPSS recording a median score of 9.5 (range 0-36) in comparison to the inpatient unit participants reporting a median of 28 (range 3-57). There was also a significant difference between the EPSS group and the Day programme group with median scores recorded as 9.5 (range 0-36) and 33 (range 0-57) respectively. This suggests that individuals in the EPSS service were reporting significantly

less depression than either of the other two services. There was no significant difference between the inpatient unit and day programme scores.

With regards to emotion regulation strategies, a significant difference was found between services for both the internally dysfunctional subscale (χ^2=7.67, df = 2, p=0.022) and internally functional subscale (χ^2=12.53, df = 2, p=0.002). Post hoc analysis using Tamhane T2 statistic indicated a significant difference between the EPSS and inpatient unit participants. The inpatient unit group demonstrated significantly higher scores on the employment of internally dysfunctional strategies to regulate emotion than EPSS (median scores of 10 (range 0-17) and 5.5 (range 1-13) respectively). In contrast, EPSS participants scored significantly higher than inpatient unit participants for utilising internally functional emotion regulation strategies with median scores of 10 (range 5-13) and 8 (range 2-16) respectively. The scores for the Day programme participants were not significantly different to the scores for EPSS or the inpatient unit.

For psychological adaptation, there were significant differences across the groups for psychological (χ^2=6.853, df = 2, p=0.033) and social (χ^2=6.853, df = 2, p=0.033) quality of life scores. Again, post hoc analysis with Tamhane T2 demonstrated significant differences between groups with EPSS rating higher adaptation scores than the inpatient unit with median scores for psychological quality of life being 50 (range 20.83–83.33) and 37.50 (range 20.8 –62.50) respectively and median scores for social quality of life being 66.67 (range 25-100) and 50 (range 0-91.67) respectively. There were no significant differences between the scores from the Day programme group in comparison to EPSS and the inpatient unit.

7.14.2 Social characteristics by service

There were no significant differences across the groups for all measures of social support with the exception of the positive social support subscale in the F-SOZU (χ^2=9.04, df = 2, p=0.011). Post hoc analysis conducted with Tamhane T2 found a significant difference between EPSS and the inpatient unit where median scores were recorded as 3.95 (range 2.82-4.82) and 3.18 (range 1.27-4.73) respectively indicating that the participants in the inpatient unit perceived less positive support from their social networks than those in EPSS.

7.14.3 Summary of service characteristics

In this section it is evident that those participants in the inpatient unit report higher levels of distress and poorer levels of psychological adaptation, particularly in comparison to those in the EPSS service. They also report utilising more internally dysfunctional emotion regulation strategies than the other services and less internally functional ones. Participants in the inpatient unit also perceived lower levels of social support from their network. In terms of attachment and mentalization, the Day programme participants demonstrate higher RF skills and coherence of transcript scores on the AAI.

7.15 Sample characteristics by diagnosis

A research diagnosis was recorded for each participant and investigated to ascertain if, as hypothesised, diagnosis provides limited evidence when trying to understand severe and enduring mental health in the context of attachment and mentalization. The alternative position of this thesis is that focus should be on the underlying mechanisms that are associated with these concepts such as emotion regulation and social support which will better explain the association between mental ill health and psychological adaptation. However, diagnosis was examined to see if it added to the evidence found thus far. Due to the sample size the diagnoses were collapsed into three groups; 1) Psychosis/ At risk mental states/ Bipolar disorder, labelled as 'psychosis' for further analysis 2) Eating disorders and 3) Depression.

7.15.1 Clinical and interpersonal characteristics by diagnosis

In terms of clinical and interpersonal characteristics there was no significant difference across the diagnostic groups for 2,3,4 and 5 way AAI categorisation and no significant difference for coherence of transcript, trauma and reflective function.

On the IIP-32, a significant difference was found between groups on the cold/ distant subscale (χ^2=6.65, df = 2, p=0.036) with post hoc analysis (Tamhane T2) indicating a significant difference between the eating disorder and depression group. Those with depression rated themselves as significantly more cold and distant than the eating disorder group (median scores 7, range 0-13 and 2, range 0-12 respectively).

In terms of emotion regulation, there were significant differences across the three diagnostic groups for the subscales of internally dysfunctional emotion regulation strategies (χ^2=8.57, df = 2, p=0.014) and internally functional strategies (χ^2=6.46, df = 2, p=0.040). Tamhane T2

post hoc testing indicated a significant difference in internally dysfunction emotion regulation scores between the psychosis and depression group. Those diagnosed with depression scored significantly higher (median score 11, range 1-16) than those with a psychosis diagnosis (median score 6, range 1-13).

There was also a significant effect across diagnostic group when considering overall depression scores as rated by the participants (χ^2=7.84, df = 2, p=0.024). Perhaps unsurprisingly, post hoc analysis indicated a significant difference between the depressed group and the psychosis group (median score 31, range 0-27 and 11, range 0-53 respectively) with the depressed group reporting significantly higher levels of low mood. There was no difference between the eating disorder group and depression or psychosis.

Finally, a significant difference was also found in psychological adaptation between diagnostic groups on the psychological quality of life subscale (χ^2=8.52, df = 2, p=0.014) and the social quality of life subscale (χ^2=7.54, df = 2, p=0.023). Taking psychological quality of life first, post hoc analysis revealed a significant difference between the depression and eating disorder group and the depression and psychosis group. The depression group scored significantly lower for perceived psychological quality of life (median score 33.33, range 16.67-70.83) than both the eating disorder group (median score 35.42, range 20.83-70.83) and psychosis group (median score 47.92, range 20.83-80.33). For social quality of life, post hoc analysis indicated a significant difference between the depression and psychosis group with the former, again, scoring lower than the psychosis group, The median score for the depression group was 50 (range 0-83.33) whereas the median for the psychosis group was 66.67 (range 16.67-100).

7.15.2 Social characteristics by diagnosis

The only social support subscale where a significant difference was found between the groups was positive social support from the F-SOZU (χ^2=12.43, df = 2, p=0.002). Post hoc analysis using the Tamhane T2 statistic indicated that the individuals diagnosed as depressed scored significantly lower on perceived positive support from their social network (median score 2.73, range 1.91-4.73) than both the eating disorder group and the psychosis group (median scores 3.72, range 2.55-4.73 and 3.95, range1.27-4.82 respectively). There was no significant difference between the eating disorder and psychosis group.

7.15.3 Summary of characteristics by diagnosis

No differences were found for attachment classification or reflective function score across the diagnostic groups. In terms of diagnostic group, participants diagnosed with depression indicate a higher degree of clinical and interpersonal difficulties including depression, poor psychological adaptation and maladaptive emotion regulation strategies. The eating disorder group report significantly higher levels of psychological adaptation and perceived positive social support than the depression group. In comparison to the other two groups, those who are in the psychosis group report higher perceived satisfaction with positive social support, less depression and better psychological adaptation.

Part IV – Hypotheses

To be able to construct and confirm the latent variables, proposed in this thesis as emotion regulation, interpersonal difficulties and social support, and investigate them in relation to a number of exogenous and endogenous variables, structural equation modelling (SEM) was performed.

7.16 Statistical analysis methods

SEM methodology was chosen over multiple regression because it allows for the investigation of multiple dependent variables and multiple indirect effects as well as providing an overall fit of the a priori model to the data provided. This is a clear advantage to multiple regression where only single dependent variables can be examined and although single meditational effects can be investigated in multiple regression, albeit in an inherently protracted way involving many comparative regressions and a large number of covariates limiting the power of analysis, multiple regression effects cannot be used with this methodology. It also does not provide an overall fit of the model to the data which is key when trying to understand complex and casual relationships.

SEM was also considered over path analysis due to the latter having highly restrictive assumptions including variables that should be measured without error, errors should not be inter correlated and paths are unidirectional. More importantly, however, is the requirement in path analysis of using single indicators which for many psychological variables is impractical because they are very rarely directly observable. For example, investigating the construct of emotion regulation in path analysis would necessitate using multiple indicators in an effort to measure this latent variable, again, a difficult process that SEM avoids by being able to construct and use latent variables within the paths.

SEM is a theoretically driven confirmatory technique that encompasses both a measurement model, in confirmatory factor analysis, and a structural model. The measurement model is assessed using confirmatory factor analysis, driven by theory, to estimate a population covariance matrix (compared to the observed matrix) with at least two indicators for each factor. Examining the measurement model allows the researcher to confirm whether the model is identified (i.e. that there is a unique solution for each model parameter). Once identified, the estimation can take place. This together with the structural model allows for the examination of direct and indirect (mediated) paths between exogenous and endogenous

variables, which are either directly observed variables or latent, based on theoretically or empirically based suppositions.

7.16.1 Assessment of the SEM

To assess a SEM a number of factors should be considered. The most obvious is the measure of 'Goodness of Fit' of the model and there are a variety of different measures in wide use. For this study the Comparative Fit Index (CFI), chi square, Root Mean Square Error of Approximation (RMSEA) and the Standarized Root Mean Squared Residual (SRMR) were used. Two index strategy fits are recommended for inclusion (Hu & Bentler 1998) because the SRMR is most sensitive to misspecified structural model components whilst the RMSEA is most sensitive to misspecified factor loadings. The CFI avoids an underestimation of fit and it is recommended to report at least two fit indices to minimise the chance of Type I and Type II errors (Hu & Bentler, 1999; Bentler, 2007). For continuous data Hu and Bentler (1999) suggested acceptance levels for the CFI should be ≥ 0.95, <0.06 for the RMSEA (with an acceptable range of 0 to ≤ 0.08), <0.08 for the SRMR and chi square should be *non significant* to indicate a good fit of the model to the data.

The sample for this analysis included all participants and was bootstrapped to provide data for 1000 cases of which data was provided for 983. Missing data were handled under the Missing At Random (MAR) assumption using Full Maximum Likelihood (FIML) estimation to fit the model using MPlus v5.21 (Muthén & Muthén 2009). Although there were no outliers, evidence for the sample demonstrated non normal distribution across the data set.

7.17 Hypotheses and analysis

From the literature review the following questions were asked of this data:

1) Does attachment and reflective function directly and indirectly predict psychological adaptation to mental health difficulties as the literature suggests?
2) Do emotion regulation, interpersonal difficulties and social support fully mediate the effects of attachment and reflective function?

Specific hypotheses were proposed as:

1) Attachment and mentalization will be associated with developmental psychopathology with a majority of insecure attachment styles and poor reflective function shown in the sample.

2) Attachment and mentalization will be associated with an individual's psychological adaptation and mood when experiencing a mental health difficulty. This relationship will be mediated by the underlying mechanism of emotion regulation.
3) Interpersonal difficulties will be associated with insecure attachment styles or poor reflective function and will be negatively associated with psychological adaptation and mood.
4) Perceptions of social support will be associated with low mood and the psychological adaptation of the individual. Perception of support will be predicted by attachment style and levels of reflective function.

An a priori path model was constructed (see figure 7.1 for schematic representation) and tested for model fit of the data and both direct and indirect pathways. Pathways were based on the theoretical assumptions discussed earlier in the literature. Namely that attachment and reflective function have both a direct effect on psychological adaptation but also an indirect effect where this relationship is partially mediated by the constructs of emotion regulation, social support and interpersonal difficulties.

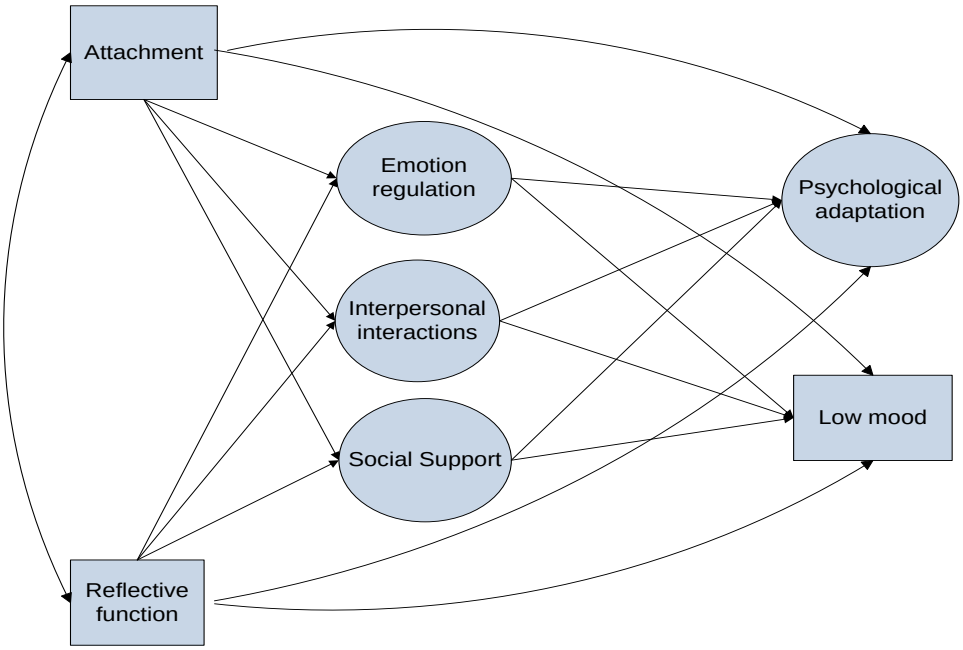

Figure 7.1 A priori baseline model for mediation for psychological adaptation and low mood in adolescents with severe and enduring mental health difficulties

This initial model had a poor fit (CFI=0.661, $\chi^2(90)=275.040$, $p<0.001$, RMSEA=0.169, SRMR = 0.217). The statistical evidence suggested further examination of the latent

variables so therefore CFA was carried out to re examine the constructs where each factor should have at least two indicators and not have correlated error variance. In this data set interpersonal difficulties was reduced to a directly observed variable, both emotion regulation and social support went from four indicators to two and psychological adaptation retained four indicators. The latent variable of social support became representative of negative social support with social strain and a negative expectation about the ability of others to help at times of difficulty. Emotion regulation as a latent variable represented positive aspects of regulation that included both internally and externally functional strategies. Psychological adaptation was represented as psychological, physical, social and environmental quality of life. Re running the SEM with the same direct and indirect paths produced a significantly better fitting model (CFI=0.863, $\chi^2(40)=92.305$, $p<0.001$ RMSEA=0.134, SRMR= 0.162).

At this stage, due to the sample size and the continued poor fit of the model, it was deemed appropriate to split the a priori model into three separate and more simplified models. Each model was based on the psychological mechanisms proposed to have an effect on the relationship between attachment, reflective function and psychological adaptation in adolescents with severe and enduring mental health difficulties. These mechanisms were emotion regulation (model 1, figure 7.2), interpersonal difficulties (model 2, figure 7.3) and social support (model 3, figure 7.4). The new models also incorporated a number of post hoc modifications grounded in theoretical assumptions), and were as follows:

- Negative emotion regulation strategies were introduced as a potential mediating variable in model 1, based on the empirical literature demonstrating a robust association between attachment/ reflective function and the development of poor emotion regulation which are in turn associated with mental health difficulties.

- Interpersonal difficulties was entered as a directly observed variable in model 2.

- The importance of quality of support and the theorised negative influence of discrepancies in social support led to the inclusion (in model 3) of a directly observed variable of overall discrepancy felt for both emotional and practical support.

7.17.1 Model 1 (figure 7.2)

Pathways were constructed as per the literature, that emotion regulation (both functional and dysfunctional) would mediate the relationship between attachment/ reflective function and psychological adaptation in this sample of adolescents with severe and enduring mental health difficulties. The basic model provided a good fit to the data (CFI=0.965, $\chi^2(20)$= 27.32, p=0.126, RMSEA= 0.071, SRMR=0.063). Figure 7.2 demonstrates that, in agreement with the literature, attachment coherence of transcript and reflective function correlate with each other and that reflective function directly predicts better psychological adaptation in this sample. An indirect relationship was found between attachment coherence of transcript, internally dysfunctional emotion regulation and psychological adaptation (β=-0.18, p=0.023) where higher coherence of transcript predicted an increased reported use of internally dysfunctional emotion regulation strategies which themselves predicted worse psychological adaptation.

To assess if this path provides a partially mediated or fully mediated model, the direct path between attachment coherence of transcript and psychological adaptation was removed. There was no significant increase in the model chi square and the model was not weakend suggesting that this model is one of full mediation. Essentially, that the effect of attachment coherence of transcript on psychological adaptation is fully mediated by the use of internally dysfunctional emotion regulation strategies.

The latent variable of functional emotion regulation strategies was negatively correlated to the use of internally dysfunctional strategies and also directly predicted better psychological adaptation.

7.17.2 Model 2 (figure 7.3)

It was hypothesised that interpersonal difficulties would be associated with attachment and reflective function whilst also having a negative association with psychological adaptation. Figure 7.3 demonstrates a model of good fit (CFI=0.976, $\chi^2(11)$= 14.78, p=0.191, RMSEA= 0.069, SRMR= 0.054) where higher levels of interpersonal difficulties predict worse psychological adaptation in adolescents with severe and endurig mental health difficulties. However, whilst in the model interpersonal difficulties was not directly related to attachment coherence of transcript and reflective function (both of which directly predicted negative and positive adaptation respectively), when it was removed from the model, the overall fit decreased. Of note, whilst the path from reflective function to adaptation did not change, the

path from attachment coherence of transcript to psychological adaptation increased from β= -0.31 to β= -0.37 suggesting that interpersonal difficulties plays a moderating role in this latter relationship.

7.17.3 Model 3 (figure 7.4)

Pathways were constructed from the literature investigating if discrepancies in social support had an effect on the proposed relationship between attachment/ reflective function and psychological adaption. This model demonstrated a good fit (CFI=0.951, $\chi^2(12)= 18.99$, p=0.0.08, RMSEA= 0.09, SRMR= 0.06) where although attachment coherence of transcript and reflective function were correlated, the former did not predict psychological adaptation whereas the latter did. Indeed, reflective function predicted both positive adaptation and higher levels of perceived discrepancy in social support. Discrepancy in social support also directly predicted worse adaptation in this adolescent sample.

When the direct path between reflective function and psychological adaptation was removed from this model, testing a fully mediated model, the overall fit decreased and the indirect path between reflective function, discrepancies in social support and adaptation were significant (β=-0.11, p=0.053). This suggests that the model is one of partial mediation. Here, where mediation may occur via discrepancies in social support, it is only partia and that reflective function has a direct effect on psychological adaptation too wither due to the intrinsic nature of this skill or perhaps there is another intervening variable that has not been accounted for in this model.

Of note, whilst this model meets criteria for CFI and non signficiant chi square, the RMSEA is outside the acceptable range of fit. However, the RMSEA can be artificially large due to greater sampling errors in small sample sizes, which this data set is considered to be in SEM. This indicates that results should be interpreted with caution as the fit is borderline acceptable.

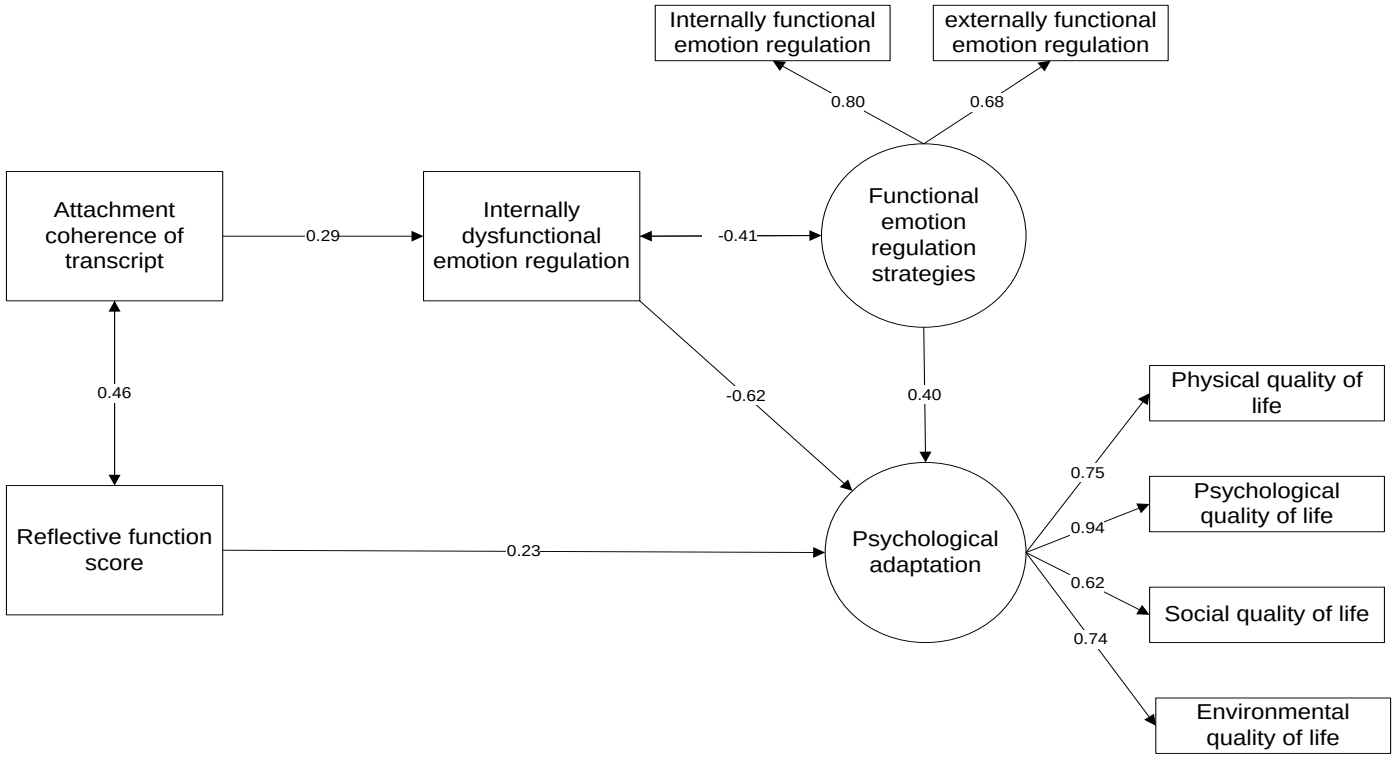

Figure 7.2

Model 1 Structural equation model for mediation of psychological adaptation through emotion regulation in adolescents with severe and enduring mental health difficulties (CFI=0.965, $\chi^2(20)= 27.32$, p=0.126, RMSEA= 0.071, SRMR=0.063)

.

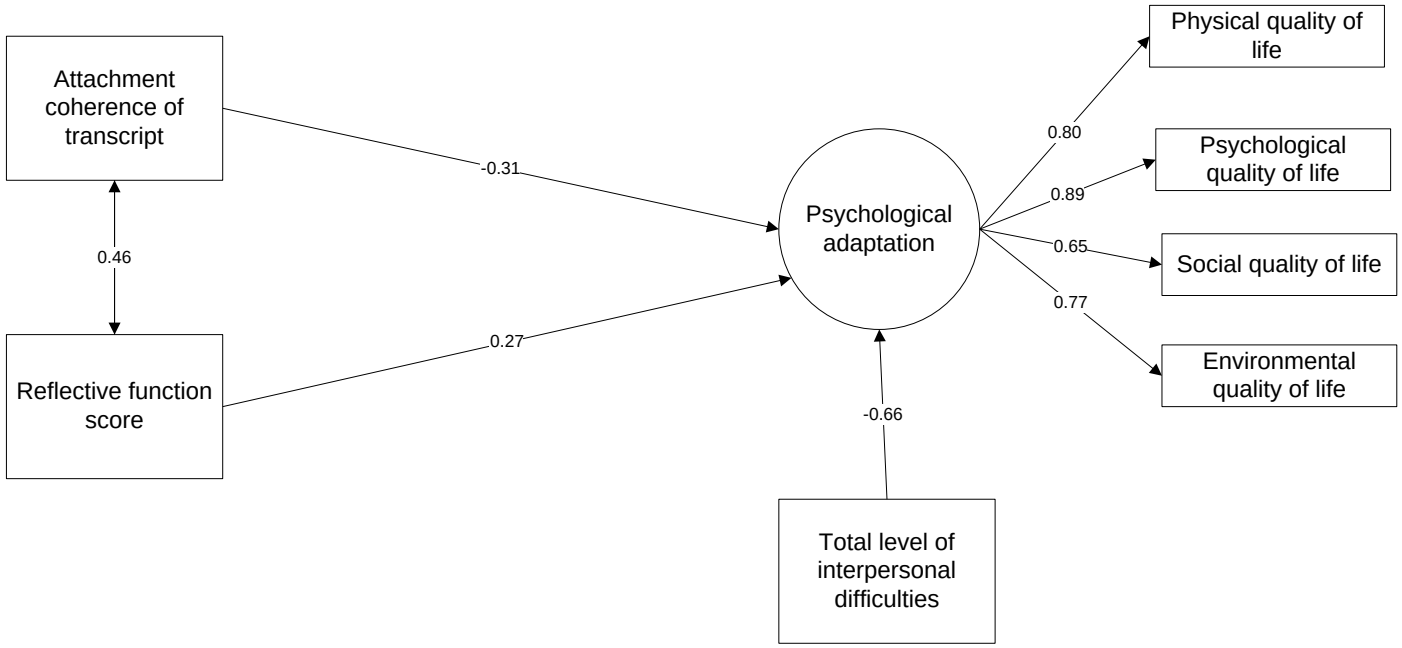

Figure 7.3

Model 2 Structural equation model for moderation of psychological adaptation on through interpersonal difficulties in adolescents with severe and enduring mental health difficulties (CFI=0.976, $\chi^2(11)= 14.78$, p=0.191, RMSEA= 0.069, SRMR= 0.054).

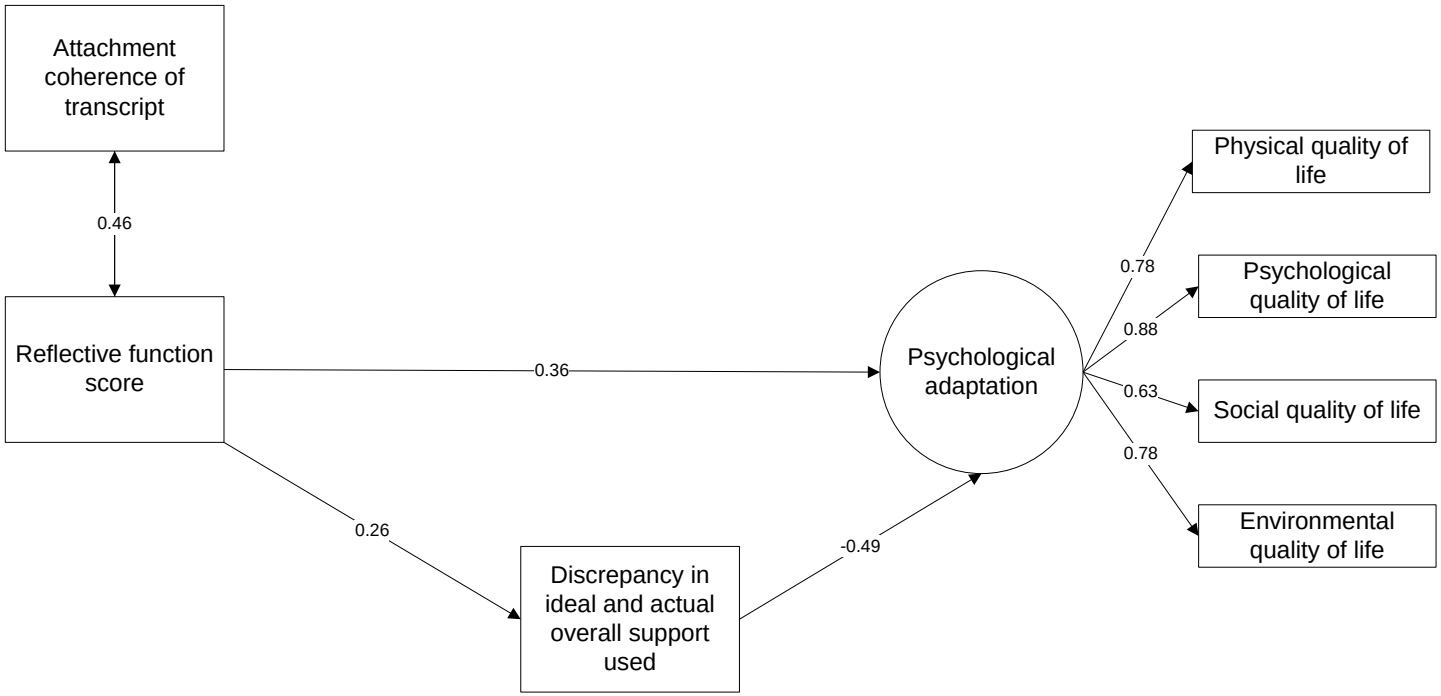

Figure 7.4

Model 3 Structural equation model for mediation of psychological adaptation through discrepancies in social support in adolescents with severe and enduring mental health difficulties (CFI=0.951, $\chi^2(12)= 18.99$, p=0.0.08, RMSEA= 0.09, SRMR= 0.06).

7.18 Summary

As Shrout & Bolger (2002) suggest,

'Mediation models of psychological processes are popular because they allow interesting associations to be decomposed into components that may be useful both for theory development and for identification of possible points of intervention' (p.422)

These confirmed models of psychological adaptation in an adolescent sample with severe and enduring mental health difficulties demonstrate causal paths and latent variables that had not yet been explored. They offer a unique insight into the exogenous variables that predict outcome and the interaction they have with other endogenous variables through both direct and indirect paths and provide a basis for which interpretation of difficulties and therapeutic interventions can be established. The following section will discuss the results presented in this chapter in terms of both theoretical and clinical implications.

Section 4

The implications of an attachment and mentalization based understanding of adolescent psychopathology

Discussion:
The implications of an attachment and mentalization based understanding of adolescent psychopathology

7.0 Introduction

This thesis presents an exploration of the clinical characteristics of an adolescent sample recruited from Tier IV Child and Adolescent Mental Health Services (CAMHS). To conclude this work, this section will focus on summarising the results both in relation to previous empirical work and theoretical context. It will present the conclusions and arguments of this thesis addressing each of the research questions posed in section 3.

7.1 Attachment and psychological correlates

In this work the majority of participants (72%), were coded as insecure which replicates previous findings from clinical samples (Allen, Hauser & Borman-Spurell, 1996; Bakermans-Kranenburg & van IJzendoorn, 2009a; Broberg, 2001; Fonagy et al., 1996; Rosenstein & Horrowitz, 1996, van IJzendoorn & Bakermans-Kranenburg, 1996, 2006). This percentage is similar to the one provided in the meta analysis of 10500 adult attachment interviews (AAI) by Bakermans-Kranenburg and van IJzendoorn (2009a) who found 73% of clinical populations (76 samples, n=1956) to have an insecure attachment. The predominance of insecure/ dismissing category in this sample replicates results from clinical adult samples (e.g Fonagy et al., 1996) suggesting that the adolescent narratives are compromised by their clinical difficulties inherent in a severe and enduring mental health difficulties. This is in contrast normative adolescent samples whereby the narrative is not restricted and extensive literature has indicated that the individual is able to utilize models of self and others during the interview and the AAI can measure their attachment representations (Allen, 2008; Main, 1991).

In line with previous meta analysis (van IJzendoorn & Bakermans-Kranenburg, 1996) type of psychopathology was not significantly related to attachment classification. This could be due to the use of a small number of diagnostic categories in this research. Alternatively, it could be due to the categorical nature of attachment classification where authors (e.g Rosiman et al., 2007) have argued analysis by group can lead to artificial cut off points that affect the power and statistics of studies. They go on to suggest that, instead, continuous analysis allows for comparison by degree rather than comparison of type and should be explored within attachment literature. In terms of the AAI, Shmueli-Goetz et al., (2008)

proposed that it is possible that some of the subscales used in the AAI to arrive at an overall classification may reflect subtle differences that are lost when using a categorical rather than continuous approach. Indeed, Rosiman et al., (2007) found subscales underlying secure and insecure/ dismissing categories were more applicable to dimensions than categories but little analysis of this kind has been conducted and Bakermans-Kranenburg and van IJzendoorn (2009a) have noted this ongoing lack of clinical studies utilising these scales. In order to avoid the limitations of categorical analysis of attachment the continuous subscale of 'coherence of transcript' was examined in this sample in relation to psychopathology and psychological correlates. When assigning a score to this overall scale, all other subscales are taken into consideration. It is, therefore, essentially a concluding score that provides the foundation for the selection of an attachment classification (Main et al., 2003) where a score of 5 or above is usually associated with secure attachment classification and a score of below 5 associated with insecure attachment.

In contrast to the categorical attachment coding, 'coherence of transcript' showed significant association with psychological correlates and adaptation within this adolescent sample. Individuals with a higher coherence score reported themselves as more self sacrificing in interpersonal relationships and less self centred. The self sacrificing nature of these interactions, where participants rated having difficulty setting limits and boundaries with other people, contribute to our understanding of the significant association found in this study between higher coherence scores, reported social strain, and a lack of received emotional support within close social relationships. By struggling to set limits, these participants may have found the needs of other people to be extremely pressing and thus find it difficult to establish their own needs within meaningful interpersonal interactions. Consequently, their levels of perceived and received social support could be limited and thus increase their vulnerability to developing psychopathology as the literature has demonstrated that small social networks and poor quality of support is associated with mental ill heatlh (Champion, 1995; Thorup et al., 2006).

Somewhat in contrast to the literature and proposed hypothesis that emotion dysregulation would be associated with insecure attachment, the results from this work suggest that the more able to freely evaluate their childhood experiences, the more the individual will report the use of internally dysfunctional strategies to regulate their emotions. The reason for this may be two fold; whilst not significant between classifications, the insecure/ dismissing group scored the lowest for using internally dysfunctional emotion regulation strategies

whilst the secure group scored the highest. This could be a reflection of what Bowlby (1980) termed 'defensive exclusion' whereby the individuals with insecure/ dismissing attachment styles attempt to block or suppress emotional distress when their attachment system is activated. Consequently they are less likely to acknowledge difficulties particularly in relation to emotional distress (Ravitz et al., 2010; Scott Brown & Wright, 2001) or focus on strategies that distract attention from the self (Kobak & Cole, 1994). In their defensive efforts of over regulation of emotions, individuals with a dismissing attachment style are less likely to recognise or acknowledge emotional distress and any associated dysfunctional strategies which could account for the lower scores on this self reported construct than secure individuals who do not actively avoid emotional distress (Shaver & Mikulincer, 2007).

Alternatively, work has demonstrated those with a secure attachment are more likely to integrate their emotional states (Lazurus, 1991) and understand them as manageable so the utilisation of what are considered dysfunctional internal methods of emotion regulation could actually be considered functional by this group. By being able to integrate their emotions, this group are more likely to acknowledge the use of emotion regulation strategies, functional or not. The high levels of distress associated with individuals in Tier IV services could mean that internally dysfunctional strategies such as 'keeping the feelings locked up inside' may prevent a threatened engulfment of feelings that could challenge their current sense of coherence and cause further emotional difficulties.

This theoretical argument can be continued with the elevated levels of depression associated with higher coherence of transcript. The minimising style and over regulation of emotions hypothesised to underlie insecure/ dismissing attachment (reflected in a lower coherence of transcript score) is likely to manifest in an under reporting of symptomatology in comparison to those with a secure attachment. Insecure attachment makes it difficult for the individual to modify their internal working model thus leaving them unable to integrate distress and subsequently make inaccurate interpretations about themselves and their emotional state (Crittenden, 1992; Kobak & Duemmler, 1994). Furthermore, the association of coherence of transcript and poor psychological quality of life could also be attributed to the ability of the more secure individuals to understand and integrate the experience of having a mental health difficulty into their sense of self. Consequently they may recognize and report these difficulties in terms of the psychological aspects of their life. Again, this would be in contrast

to those with a minimising strategy where the possible negative impact of illness on their lives is downplayed or avoided.

This work contributes to the current understanding of attachment and psychopathology by demonstrating an indirect relationship between the two constructs. In this sample, attachment affects the inner representations an individual has regarding their emotional states which, in turn, predicts outcome and adaptation in psychopathology. Those with a secure attachment can integrate their emotional states and report difficult feelings and poor regulation strategies whilst those with an insecure/ dismissing attachment over regulate their emotions and minimise the impact they have on themselves and their actions.

7.2 Mentalizing skills and psychological correlates

In keeping with theory, it is proposed that mentalization develops within the context of early attachment relationships where sensitive caregiver interactions facilitate the development of reflective function (RF) within a secure attachment. A failure of sensitivity in these interactions, leads to the inhibition of mentalizing skills. As a result, an individual struggles to identify the mental states of both themselves and others (Fonagy et al., 2004). This premise is supported by the findings of this work where RF scores significantly differentiated secure and insecure attachment classification, and were also positively correlated with coherence of transcript scores. Those who were classified as secure demonstrated an 'ordinary' level of reflective function where the individual,

'...shows an ordinary capacity to make sense of their experiences in terms of thoughts and feelings... has a consistent model for thoughts and feelings of self and other...(but) the model is limited and does not include understanding of conflict or ambivalence' (p.58) (Fonagy et al., 1998).

Those deemed insecure could only demonstrate 'questionable/ low' reflective function where there attempts to mentalize were classified as naive, simplistic or potentially over analytical where,

'Interview shows a partial understanding of the intentions of others, but this understanding is likely to be banal, clichéd, and excessively general and superficial...normalization of experience extends beyond what is culturally acceptable...does not enter into complexities of mental states' (p.58) (Fonagy et al., 1998).

The overall observed level of RF in this sample of 'questionable/ low', was similar to results of previous studies in both clinical (Fischer-Kern et al., 2010; Fonagy et al., 1996; MacBeth et al., 2011; Rothschild-Yakur et al., 2010) and forensic samples (Levinson & Fonagy., 2004). Sharp et al., (2009) propose that where mentalizing skills have not been learned,

individuals' are likely to distort their experience according to the happenings in their external world rather than to the mental states of themselves and others. If these experiences are negative they threaten to overwhelm them emotionally which results in the employment of non mentalizing strategies. This is reflected in the over regulation or under regulation strategies employed by those in this sample with insecure attachment styles in efforts to manage their adaptation to having a severe and enduring mental health difficulty. Moreover, Sharp et al, (2009) argue that this vulnerability to the breakdown in reflective function sends an individual on the path of developing or maintaining psychopathology through the collapse of functional behavioural and emotion regulation demonstrated in the poor reflective function in clinical samples. In addition, and of relevance to the sample in this thesis, adolescence is a developmental period bringing challenging experiences of individuation and formal operations. Fonagy et al., (2004) argue that this time occasionally necessitates a withdrawal from the mentalizing stance to prevent the adolescent feeling overwhelmed by the concurrent complex emotions this stage brings. Again, if the quality of the mentalizing skills is not adequate, the authors posit that this could be another mechanism in the vulnerability to developing psychopathology. Here, longitudinal work is crucial to determine the RF skills of an adolescent pre, during and post the development of psychopathology.

Even though the overall level of RF was low, this sample of clinical adolescents demonstrated a range of mentalizing skills scoring from -1 (a disavowal of a reflective stance) to 7 (marked RF). At the top end, individuals showed greater detail about the mental states of self and other, arrived at an original reintegration of states of mind and were able to maintain a developmental perspective. Numbers who scored at this level were few, however, but other studies in clinical samples did not report the range of RF scores which precludes comparative analysis.

From these results it can be concluded that the low level of mentalization in this clinical adolescent sample was comparable to the level found in other adult clinical samples. At this stage of analysis, however, and with the exception of physical quality of life, no clinical or interpersonal correlated were associated with RF. However, the association with coherence of transcript suggested an indirect relationship between RF, outcome and adaptation which was explored further with the employment of structural equation modelling and will be discussed when considering the research questions.

7.3 The underlying mechanisms

The proposed underlying mechanisms of emotion regulation, interpersonal difficulties and social support demonstrated a range of results when measured in this thesis. The level of interpersonal difficulties reported fell into the 'normal' range, yet this sample utilised both internal and external functional and dysfunctional strategies far more than a normative sample. Arguably, it may well be expected for those experiencing severe and enduring mental health difficulties to demonstrate more internally and externally dysfunctional strategies but the use of internal and external functional strategies is more surprising. Perhaps this is a reflection of the time spent in CAMHS services where therapeutic interventions could have helped an individual develop more effective strategies for managing their emotional distress. An alternative hypothesis is that the significant associations between emotion regulation and the perceived amount of social support suggest a facilitation of emotion regulation strategies dependent on support levels.

When investigating the support received from a partner, close relative or close friend this sample scored similarly to other clinical groups when considering the discrepancy in support (Neeleman & Power, 1994) where less support, both practically and emotionally, was received than desired (Power et al., 1988). This is of crucial importance as the literature has consistently found associations between a lack of social support and psychopathology (Cohen, 2000; Reicher, 2003; Sheeber et al., 1997; Sroufe et al., 2002; Stice & Randell, 2004; Ystgaard et al., 1999) and also increased hospitalization (Cohen et al., 2004; Huang et al., 2008). In this sample discrepancies in support perceived from the overall network were significantly associated with higher use of internally dysfunctional emotion regulation strategies. Higher internal dysregulation is associated with psychopathology (e.g. Nock & Prinstein, 2005; Weismore & Esposito-Smythers, 2010; Zonnevylle et al., 2005) suggesting that it may be a mechanism that works in conjunction with social support whereby internally dysfunctional emotion regulation strategies are the tangible coping mechanism that represents the individual's dissatisfaction with the social support they receive.

Earlier work by Ystgaard et al., (1999) highlighted the importance of investigating social support by source. When discrepancies in social support were broken down into where these anomalies lay, in this research it was found that discrepancies were exclusively in relationships with close relatives. In line with the current literature (Champion et al., 1995; Stadler et al., 2010), the actual and ideal emotional and practical support associated with close relatives was significantly and positively associated to externally functional emotion

regulation strategies. Also in agreement with the literature that has found a lack of social support from families being associated with poor adaptation (Reicher, 2003; Sheeber et al., 1997), the lower the score on actual practical support received from close relatives, the higher the score for externally dysfunctional emotion regulation strategies. Again, these results demonstrate the positive and negative impact of familial social support on the adolescent's ability to regulate their emotions in response to stressors. Arguably this is redolent of previous findings where a perceived lack of support is hypothesised to reflect a heightened sensitivity to distress (Onwumere et al., 2009) and lead to the employment of maladaptive emotion regulation strategies. Furthermore, the discrepancy on emotional and overall levels of support found in close relatives significantly correlated to poor adaptation across all four domains, psychological, physical, social and environmental quality of life as well as being associated with higher depression scores, echoing precious findings where a lack of social support has been associated with poor adaptation (Brugha et al., 2007; Lindberg & Swanberg, 2006; Sarason et al., 1990) although this study is the first to investigate these psychological correlates in a clinical adolescent sample.

Also of note, is the finding that individuals with at least one parent having a mental health difficulty have much lower expectations in terms of the amount of practical help they will receive from their parents. In addition, they also report wanting less practical help than adolescents whose parents do not have mental health difficulties. The results reflect the current literature that when a parent has a mental health difficulty there is a perceived lack of social support and this is linked to an increased risk of developing psychopathology (Hoefnagels et al., 2007; Rousit et al. 2010). Werner (2003) suggests that in the case of parental mental health difficulties a functional social support strategy in adolescence is to look outside the family situation and utilize support from other sources, perhaps explaining why adolescents in this study rated lower levels of ideal practical help from their parent than their peers.

Continuing on the topic of peers, internal and externally functional emotion regulation strategies were significantly associated with overall perceived emotional support within this sample where these strategies were also associated with more perceived emotional support from peers. In addition, externally functional strategies were also associated with higher levels of perceived practical support from friends. These results are encouraging considering that adolescents have expressed preference for help seeking to friends when experiencing mental health difficulties (Kelly et al., 2006; Wright et al., 2005). The fact that overall

perceived support was significantly associated with higher ratings on social quality of life also suggests that both family and peer relationships could play a protective role in the adaptation to psychopathology.

To conclude this section, the nature of interpersonal relationships, social support and emotion regulation plus the experiences of early caregiver interactions have demonstrated an effect on the psychological adaptation and mood of adolescents with severe and enduring mental health difficulties. However, how these underlying mechanisms work within the context of attachment and mentalization has not yet been explored. This is where this thesis contributes to current knowledge and understanding by examining the effect of the exogenous variables of attachment and mentalization on psychological adaptation and the interaction they have with the proposed underlying mechanisms through both direct and indirect pathways. It offers a unique perspective demonstrating the integral role the variables of emotion regulation, social support and interpersonal difficulties play within the developmental framework of attachment and mentalization framework and answered the following research questions.

7.4 Research question 1

'Does attachment and reflective function directly and indirectly predict psychological adaptation to mental health difficulties?'

Through structural equation modelling (SEM), reflective function was found to directly predict an adolescent's current adaptation to their mental health difficulty where better mentalizing skills predicted better psychological adaptation, a replication of recent findings (Ostler et al., 2010). It was also correlated to higher attachment coherence of transcript scores. This pathway highlights the proposed synthesis between the two constructs of attachment and mentalization (Bateman & Fonagy, 2006). In addition, the RF score in this sample of individuals classified as secure was similar to those found in non clinical control groups used by Fonagy et al., (1996) and Levinson & Fonagy (2004). This suggests that the ability to mentalize is not outside the capability of individuals with mental health difficulties despite strong evidence showing a low RF score across clinical groups (Fischer-Kern et al., 2010; Fonagy et al., 1996; MacBeth et al., 2011; Rothschild-Yakur et al., 2010). It is, however, important to acknowledge that in this sample the ability to mentalize has occurred within the context of secure attachment styles where the individual would have experienced their caregiver as responsive to their arousal, mirrored their emotional states and provided

care through proximity. This means these individuals have achieved self regulation and developed a coherent sense of themselves and others (Bowlby, 1988) and were able to feel safe to explore the minds of themselves and others (Sharp et al., 2009). By understanding the mental states and intentionality of interactions between themselves and others, better mentalizing skills in this sample directly predicted better psychological adaptation where an individual can integrate negative emotional states without fear of emotional engulfment (Sharp et al., 2009). This is a unique finding in clinical adolescent samples where literature is both sparse and focuses on the negative rather than the positive associations of mentalization within mental health settings.

Coherence of transcript was utilised as a continuous measure of attachment and was in itself correlated to reflective function scores with higher reflective function was associated with higher coherence of transcript scores. The proposition above that mentalizing skills are fostered and learned within the context of early caregiver relationships (Fonagy et al., 2004) perhaps renders this result unsurprising. However, this study demonstrates that the AAI and RF scores are measuring theoretically different concepts because across the three models, there was variability in the direct, indirect and moderated effects of attachment and reflective function when considering the psychological mechanisms underpinning their relationship to psychological adaptation. Whilst attachment and mentalization are argued to work in synthesis with each other and provide beneficial effects in the face of negative life events (Bateman & Fonagy, 2006), RF scores are concerned with the ability of the participant to reflect on their own, and the mental states of others throughout the AAI and how they attribute reasoning for the intentions of others in the interpersonal interactions they have experienced. Attachment classification, on the other hand, is concerned with the coherence and collaborative nature of the narrative put forward by the individual when discussing their childhood experiences. Whilst credit may be given for certain reflective statements (if evident), attachment is coded according to the Gricean principles of language where mental states are not of primary concern.

The relationship between attachment and mentalization in relation to adaptation and outcome is evidently not straightforward. Although RF directly predicted adaptation, it did not predict outcome in terms of mood and attachment demonstrated only indirect paths to outcome and adaptation. The pathways evident in the SEM analysis (see Section 3 figures 7.2, 7.3 and 7.4) suggest mediated, partially mediated and moderated paths between attachment/ reflective function and adaptation through a number of mechanisms. These were identified as

emotion regulation, social support and interpersonal difficulties, which requires us to consider the second research question.

7.5 Research question 2

Do the latent variables of emotion regulation, interpersonal difficulties and social support fully mediate the effects of attachment and reflective function?

Whilst the majority of the literature on clinical populations and attachment focuses on association, this thesis moved to investigate causal pathways and the mechanisms underlying these relationships. Considering not all individuals with an insecure attachment or poor reflective function develop a mental health difficulty (Scott Brown & Wright, 2003), it has to be concluded that there are other factors within the relationship between attachment and adaptation that play a role in the development of psychopathology.

Emotion regulation was a variable that loaded as two separate constructs; function emotion regulation strategies and internally dysfunction emotion regulation strategies. Beginning with functional emotion regulation, this latent variable was constructed from both external and internal functional emotion regulation strategies and predicted an individual's psychological adaptation to their mental health difficulty. This idiosyncratic pathway is perhaps the first of its kind to provide evidence that functional emotion regulation strategies (e.g. 'I talk to someone about how I am feeling') can serve as a protective mechanism in adolescents with mental health difficulties. In this sample it is therefore proposed that those with higher RF skills are to integrate their experience of mental health difficulties and consequential emotional distress by employing functional internal and external emotion regulation strategies and utilizing the perceived support from others. This results in better psychological adaptation in comparison to those with lower levels of mentalization.

In contrast to previous literature where a secure attachment has been associated with adaptive emotion regulation (Zimmermann, 1999) this work established attachment was not associated with functional emotion regulation at all. In fact, the higher an individual in this sample scored on the AAI transcript the more likely they were to utilise internally dysfunctional emotion regulation. Indeed, in contrast to reflective function, coherence of transcript was not directly related to adaptation but indirectly through the use of internally dysfunctional emotion regulation strategies. The indirect relationship between attachment and psychological adaptation was fully mediated by the use of internally dysfunctional

emotion regulation strategies. In this sample, the more able the individual was to present a coherent narrative of their childhood experiences the more they reported using dysfunctional internal emotion regulation strategies (e.g. 'I keep the feeling locked up inside').

Arguably this result is a reflection of the phenomena discussed in section 7.1 whereby those with higher coherence scores, which are more representative of a secure attachment classification, are more likely to be open about the levels of emotional distress they are experiencing in comparison to those with lower scores. Although this hypothesis is in contrast to the findings of Keskin and Çam (2010) who found insecure attachment styles predicted higher reporting of emotional distress and difficulties than secure styles, and Lapsley et al. (2000) who found insecure attachment predicted depression, it should be noted that the authors examined non clinical populations. Arguably, the potential consequences of reporting distress and difficulties in a clinical setting (e.g. involuntary admission), compared to a non clinical one may bias reporting styles. By definition, the fact that the individuals in this sample were already in Tier IV CAMHS services means they would have previously shown distress, difficulties or poor adaptation in life resulting in them being referred to the service. As the predominant attachment style of this sample is one of insecure/ dismissing, it is likely that this referral, which would have activated their attachment system, exacerbated their strategy of minimisation which manifests itself in the under reporting of emotional regulation difficulties particularly if they did not want to attend Tier IV services. Indeed, almost a quarter of this sample did not believe they had mental health difficulties at all and would therefore not recognise, and are unlikely to report, distress. The formulation of this thesis, therefore, is that these individuals are more able to integrate and report on their inner representations of emotional distress and can acknowledge the use of non optimal regulation styles than those with an insecure attachment style.

Indeed, within the three models, reflective function also directly predicted psychological adaptation suggesting that those with a better understanding of their own and others mental states leads to a better understanding of their emotions and regulation strategies. This expands on the work by Ostler and colleagues (2010) who reported that higher levels of mentalization were associated with a better acknowledgement of feeling and symptoms. Internally dysfunctional emotion regulation strategies have been found to be associated with pathology in adolescence (e.g. Nock & Prinstein, 2005; Weismore & Esposito-Smythers, 2010; Zonnevylle et al., 2005). Considering the results within this thesis it is suggested that internally dysfunctional emotion regulation is an underlying mechanism related to

attachment and it is through the utilisation of these strategies that attachment is related to poor adaptation.

There is one further area to discuss, the mechanism of social support. In the SEM, the discrepancy between the amount of support received and the ideal amount desired by the individual was both predicted by reflective function scores and also directly predicted psychological adaptation itself. Higher levels of mentalization predicted higher reported levels of discrepancy in social support which in turn predicted poorer adaptation. In addition, discrepancies in support also patially mediated the direct relationship between reflective function and psychological adaptation. This finding echoes the literature which suggests that the size of social networks are less important than the quality of these relationships (Brugha et al., 2007; Champion, 1995). Indeed, this result replicates the empirical evidence that has shown dissatisfaction with support received to be associated with poor adaptation in terms of depression (Rockhill et al., 2009; Sheeber et al., 1997; Stice & Randell., 2004; Windle, 1992) and an increase in symptomatology (Angell & Test., 2002). In fact, considering the evidence suggesting that higher levels of perceived support are associated with increased well being (Lindberg & Swanberg, 2006), quicker recovery (Johnson et al., 2000) and decreased likelihood of relapse (Cohen et al., 2004), the findings of this thesis present the a contemporary rationale for the consequences of wanting but not receiving as much support as desired.

The results exploring the function of the underlying mechanisms of emotion regulation, social support and interpersonal difficulties have found that they play both mediator and moderator roles in the relationship between attachment and mentalization in respect to psychological adaptation and outcome. Emotion regulation strategies have a positive effect on adaptation when functional, whereas internal dysfunctional strategies mediated the relationship between attachment and the adaptation of the adolescent. Discrepancies in the amount of social support received partially mediated the effect of reflective function on adaptation whilst also predicting poorer adapatation plus interpersonal difficulties moderated the effect of attachment and reflective function on psychological adaptation to mental health difficulties. These results have influential implications for future clinical work within this particular client group.

7.6 Clinical implications

The direct prediction of mentalizing skills on positive adaptation in this sample provides a compelling voice to the argument for mentalizing structures to be in place for therapeutic interventions with adolescents experiencing mental health difficulties. Whilst this does not yet exist within Scotland, there are a number of services that have developed in England to provide such treatment. There is the Adolescent Mentalized-Based Integrative Therapy (AMBIT) model being rolled out in CAMHS services. They offer individual, group and family work that promote the individual and family's capacity to mentalize within attachment relationships, increasing the mentalizing skills of the adolescents and aiming to reduce non mentalizing cycles within the family (see http://ambit.tiddlyspace.com/ for further details). Working within this formulation, this clinical work could also affect the perceived levels of social support by reducing the felt discrepancies by the adolescent through the facilitation of mentalized communication between themselves and individuals in their social network regarding the emotional and practical support they want and receive. This could potentially reduce the negative effect on psychological adaptation that was observed in this sample. Furthermore, higher levels of social support have been associated with quicker recovery (Johnson et al., 2000) and decreased relapse (Cohen et al., 2004).

A systemic approach is also recommended to counteract the negative effects of social support. This thesis demonstrates the positive effect of higher levels of perceived support in facilitating function internal and external emotional strategies for regulating emotions that consequently predict better adaptation. By enhancing mentalizing skills within the individual, enabling them to understand the mental states of themselves and others they would be able to build and maintain helpful and supportive relationships. This would provide a secure foundation from which an individual can learn and become skilled at employing helpful and purposeful strategies to help them regulate their emotions at times of distress thus leading to better adaptation.

In addition, as the perception of strain and negative expectations about others being able to help was associated with interpersonal difficulties, and consequent low mood along with poor adaptation, exploring the important relations within the network of an adolescent is of great importance. Of note, empirical work considering service users perspectives on the management of psychiatric emergencies identified the increased use of peer support services to improve psychiatric care (Allen, Carpenter, Sheets, Miccio & Ross, 2003). Indeed, *how* the relationships serve an individual's need for support is an important consideration. For

example, Robinson et al., (2010) proposed that peer support, from an individual who has experienced similar difficulties, can be a source of hope, comfort and encouragement. In response to previous findings where peer support has improved social relationships in first episode psychosis (Castelain, Bruggerman, van Busschbach, Gaag, Stant, Knegtering & Wiersma, 2008) and severe psychiatric difficulties (Fukui, Davidson & Rapp, 2010; van Gestel-Timmermans, Brouwers, van Nieuwenhuizen, 2010), Robinson et al. (2010) are trialling a 6 month peer support program under the hypothesis it will improve social relationships in young people with first episode psychosis. The outcome of this trial should be followed closely and will hopefully demonstrate the success of proactive, rather than reactive, action in the provision of social support.

A further clinical consideration to make concerns the expression of distress within clinical adolescent populations. The formulation of this thesis proposes that the strategy of over regulation used in those with a dismissing attachment style inhibits the reporting of distress thus questioning the validity of current self report measures. More multi modal methods should be used in research and practice, including observer rated instruments, where clinical work is not based on first impression. Indeed, Dozier (1990) found that those with a secure attachment were more likely to engage in treatment provided by psychiatric services than those with an insecure/ dismissing strategy who were less likely to seek out or accept treatment, even compared to those with an insecure/ preoccupied attachment style. The lack of disclosure found in the dismissing group has obvious implications for an interrupted recovery and has been associated with clinicians prematurely ending their attempts to help (Dozier & Lee, 1995).

The findings of this thesis also raise the issue of how emotional distress is conceptualised within adolescence. This author argues that it should be considered within a developmental context not just based on early caregiver experiences and ability to mentalize but also the stage of development, strategies of emotion regulation and the utilisation of social support from all avenues of life.

7.7 Limitations and future work

This study is subject to a number of limitations. The first caveat is the cross sectional design of the study which precludes the ability to monitor the group across time in clinical presentation, attachment and reflective function. The nature of attachment developing from early caregiver relationships means that classification is considered fixed from late childhood

with the internal working models of that individual shaping and guiding future interactions. However, whilst robust test-reliability in the AAI has been established in normal populations (Ammanati et al., 1996; Bakermans-Kranenburg & van IJzendoorn, 2003; Crowell et al., 1996) it has not yet been assessed in clinical adolescent populations. Doing so in such a key developmental stage would certainly add to the literature on attachment stability across the lifespan. From the observations of the author during the AAI with adolescent participants, it was noted how difficult a task many of them found it to be. Whilst adolescence is known to be a developmentally challenging period it has been noted that they are able to present coherent narratives of their childhood experiences when considered in the normal population (van IJzendoorn & Bakermans-Kranenberg, 1996). This author suggests then that the over representation of dismissing speakers in this thesis is due to the inherent clinical difficulties within this particular population and was evident from an inhibition of their emotional language, a lack of narrative regarding loss and trauma and short interview lengths. The author did note, however, that the structure of the AAI potentially exacerbates these effects as probing or scaffolding around the questions is prohibited. The questions and structure of the Child Attachment Interview (Schmueli-Goetz et al., 2008) perhaps offers a viable alternative. It is based on the AAI, contains 19 questions and is aimed at young people aged between 8 years and 15 years (middle childhood). Most importantly, however, it contains developmentally appropriate scaffolding for each question whilst relying on both verbal and non verbal communication. The author posits that the age range for the CAI allows for a less restrictive adolescent age framework (where the AAI participants have to be 13 years plus but arguably, adolescence can begin a number or years earlier for some individuals) and where the scaffolding of questions would make the task of presenting a a narrative of parental representation an easier one for adolescents who are experiencing serious and severe mental health difficulties. Indeed, further work with limitless funding and time restraints could address both these issues. The CAI could be validated and test- retest validity examined within clinical populations with the potential to extend the age range to 18 years to fit within a CAMHS framework in the UK. Secondly, comparisons could be made between adolescent's AAI and CAI classifications to assess if the over representation of dismissing speakers is a methodological issue or representative of certain clinical difficulties. Similary, the under representation of the unresolved category in adolescence (Bakermans-Kranenberg & van IJzendoorn, 2009a) could be examined as Schmueli-Goetz et al. (2008) argue that behavioural displays of disorganisation are missed by the AAI and are perhaps more developmentally relevant in young people.

It has also been postulated that negative life events can sometimes cause changes in attachment classification, usually from secure to insecure (Crowell et al., 2002) so repeated AAIs could provide further evidence in relation to this particularly considering the majority of people experiencing mental health difficulties have experienced difficult and sometimes traumatic life events and that they have a more pervasive nature in the trajectory of adolescent development (Compas, 1987). Indeed, longitudinal follow up would enrich this data set because it has also been acknowledged that mentalizing skills that can be increased through specific mentalization based therapy (e.g. MBT Bateman & Fonagy 2004, 2006) so pre and post therapeutic intervention AAIs in clinical adolescent samples could provide a wealth of new information regarding the capacity for increasing reflective function.
The exploratory nature of this study is both a strength and a weakness. A strength in that, to the authors knowledge, this is the first study of its kind to investigate the underlying mechanisms of psychopathology in adolescents within the context of attachment and mentalization. On the other hand, the lack of a control group makes normative comparison very difficult. Whilst individual measures were assessed in relation to psychometric norms it would have been a valuable addition to have a matched control group for the final SEM. This would have allowed further exploration looking at the psychological adaptation of adolescents to 'normal' life and comparison to the adaptation that occurred to a mental health difficulty within this sample. The sample size is also relatively small thus increasing the possibility of type II errors and the need for caution when interpreting statistically significant results. In addition, the small number of insecure/ preoccupied and unresolved individuals' precluded further analysis by attachment classification so replication with a larger sample is of paramount importance. Again, with limitless finances and time constraints aside, this study could be continued within CAMHS services until a sufficient sample size was established. A further extension of this thesis could be regular 5year or 10 year follow up sessions for all participants to repeat all measures, not just the AAI, and to see the developmental trajectory they have followed, any life events they may have experienced and how they consider their current adaptation. If a control group was established this would make comparison between the groups even more interesting.

The overall sample size in this thesis, however, was addressed when using SEM by employing a 'bootstrap' method to the analysis. This procedure involves creating an artificial sample (n) by randomly extracting data from the original sample (N) where an object is computed that randomly draws elements of data from N. This is repeated as many times as desired e.g. 1000 times thus creating 1000 new objects that forms the sample n. As Varian

(2005) suggests, essentially this statistical technique allows for the estimation of the sample distribution for almost all statistics. In addition, a further argument for using bootstrapping to augment the sample is that the procedure is independent to distribution. So, when theoretical distributions of the statistics are complicated or unknown, as was the case in this thesis, bootstrapping can indirectly assess the distribution of the sample and therefore, the parameters derived from the distribution (Adèr, Mellenbergh and Hand, 2008). Moreover, selecting a large number of bootstraps (>500) reduces the effects of random sampling errors which can arise from a bootstrap procedure itself.

A third caveat concerns the recruitment of participants into the study. The design was for individuals to be identified by their key workers, clinical psychologists and/ or RMO. Whilst the author was in close consultation with clinicians about suitability and inclusion criteria, clinicians may still have only referred those they considered 'stable enough' to take part. This may have resulted in a recruitment bias where those with the worst adaptation and most severe difficulties were excluded meaning this sample may not be fully representative of adolescents within Tier IV CAMHS services. This reflects the challenging nature of child and adolescent research where young people are often acutely unwell and staff perhaps play a protective role that can inhibit the examination of the tru population. What should be noted, however, that the refusal rate in this study was only 9%, and to the author's knowledge, this is the largest UK sample of clinical adolescents investigating attachment, mentalization and the underlying mechanisms of emotion regulation, interpersonal difficulties and social support in relation to psychological adaptation and outcome.

7.8 Conclusions

To the author's knowledge, this is the first study to investigate the mechanisms underlying severe and enduring mental health in an adolescent sample within the context of attachment and mentalization. This thesis contributes to the current understanding of psychological distress within adolescent populations with severe and chronic mental health difficulties.

This work has demonstrated an undeniable connection of attachment and reflective function to psychological adaptation and outcome in this group. It has addressed the lack of causality within the emotion regulation literature as suggested by Lewis et al., (2010) by finding both the mediating role it plays in the relation to mentalization and attachment and the predictive role it has in outcome and adaptation. These results have also demonstrated the importance of positive associations of social support for adolescents, particularly in relation to close

relatives and peers, and how damaging the consequences can be in relation to psychological adaptation and depression when it is lacking.

Of particular note, is the relationship found where mentalization skills predicted psychological adaptation. The developmental period of adolescence provides a unique challenge to an individual in terms of negotiating more complex cognitions and emotions (Fonagy et al., 2004). The fact that reflective function is a learned skill that can occur within the context of therapeutic relationships makes this a realistic target for positive intervention and adaptation. In addition, the large representation of insecure/ dismissing attachment style arguably reflects a probable functional, albeit defensive, mechanism whereby the individual over regulates their emotions and refuses to consider the mental states of themselves and others. The experience of developing a mental health difficulty is likely to exacerbate this position and is reflected in under reporting of symptoms, maladaptive coping strategies, and negative experiences with social support. Therapeutic interventions that focus on helping an adolescent become aware of their own mental states and those of others, that provide an emotional language and a secure base from which to explore them, are imperative in aiding psychological adaptation and outcome in adolescent mental health difficulties. By helping an individual adapt their dysfunctional strategies or replace them with a functional one, the subsequent development of low mood or poor adaptation may be halted or the at least, the effect diminished. As Bowlby (1980) hoped,

'...despite all its deficiencies, our present knowledge may be sound enough to guide us in our efforts to help those already beset by difficulty and above all to prevent others becoming so.' (p.442)

References

Abaied, J., & Rudolph, K. (2010). Mothers as a resource in times of stress: interactive contributions of socialization of coping and stress to youth psychopathology.

Aber, J., Slade, A., Bresgi, I., Berger, B., & Kaplan, M. (1985). *The Parent Development Interview.* Unpublished Manuscript.

Adam, K. S., Sheldon-Keller, A. E., & West, M. (1996). Attachment organisation and history of suicidal behavior in clinical adolescents. *Journal of Consulting & Clinical Psychology, 64*(2), 264-272.

Adèr, H. J., Mellenbergh, G. J., & Hand, D. J.. (2008). *Advising on research methods: A consultant's companion.* Huizen, The Netherlands: Johannes van Kessel.

Adrian, M., Zeman, J., Erdley, C., Lisa, L., Homan, K., & Sim, L. (2009). Social contextual links to emotion regulation in an adolescent psychiatric inpatient population: Do gender and symptomatology matter? *Journal of Child Psychology and Psychiatry, 50*(11), 1428-1436.

Adrian, M., Zeman, J., Erdley, C., Lisa, L., Homan, K., & Sim, L. (2009). Social contextual links to emotion regulation in an adolescent psychiatric inpatient population: do gender and symptomatology matter? *Journal of Child Psychology & Psychiatry & Allied Disciplines, 50*(11), 1428-1436.

Ainsworth, M. (1968). Object relations, dependency, and attachment: A theoretical review of the infant mother relationship. *Child Development, 40*, 969-1025.

Ainsworth, M., Blehar, S., Waters, M., & Wall, E. (1978). *Patterns of attachment: A psychological study of the Strange Situation.* . Hillsdale, NJ: Erlbaum.

Ainsworth, M. D. S., & Eichberg, C.G. . (1991). Effects of infant-mother attachment of mother's unresolved loss of an attachment figure or other traumatic experience. In P. Marris, J. Stevenson-Hinde & C. Parkes (Eds.), *Attachment across the life cycle*. New York: Routledge.

Ainsworth, M. S. (1997). The personal origins of attachment theory. An interview with Mary Salter Ainsworth, Intervew by Peter L. Rudnytsky. *Psychoanalytic Study of the Child, 52*, 386-405.

Aldao, A., Nolen-Hoeksema, S., & Schweizer, S. (2010). Emotion-regulation strategies across psychopathology: A meta-analytic review. *Clinical Psychology Review, 30*(2), 217-237.

Alexander, M. J., Haugland, G., Ashenden, P., Knight, E., & Brown, I. (2009). Coping with thoughts of suicide: techniques used by consumers of mental health services. *Psychiatric Services, 60*(9), 1214-1221.

Alexander, P. C. (1992). Introduction to the special section on adult survivors of childhood sexual abuse. *Journal of Consulting & Clinical Psychology, 60*(2), 165-166.

Alink, L. R., Cicchetti, D., Kim, J., & Rogosch, F. A. (2009). Mediating and moderating processes in the relation between maltreatment and psychopathology: mother-child relationship quality and emotion regulation. *Journal of Abnormal Child Psychology, 37*(6), 831-843.

Allen, J., & Land, D. (1999). Attachment in adolescence. In J. Cassidy & P. Shaver (Eds.), *Handbook of Attachment: Theory, Research and Clinical Applications*. New York: The Guildford Press.

Allen, J. P. (2008). The attachment system in adolescence. In J.Cassidy & R.Shaver (Eds.), *Handbook at attachment: Theory, research, and clinical applications (2nd edition)* (pp. 419-435). New York: Guildford.

Allen, J. P., Borman-Spurrell, E., & Hauser, S. T. (1996). Attachment theory as a framework for understanding sequelae of severe adolescent psychopathology: An 11-year follow-up study. *Journal of Consulting and Clinical Psychology, 64 (2)*, 254-263.

Allen, J. P., Hauser, S. T., Bell, K. L., & O'Connor, T. G. (1994). Longitudinal assessment of autonomy and relatedness in adolescent-family interactions as predictors of adolescent ego development and self-esteem. *Child Development, 65*(1), 179-194.

Allen, J. P., McElhaney, K. B., Land, D. J., Kuperminc, G. P., Moore, C. W., O'Beirne-Kelly, H., et al. (2003). A secure base in adolescence: markers of attachment security in the mother-adolescent relationship. *Child Development, 74*(1), 292-307.

Allen, M., Carpenter, D., Sheets, J., Miccio, S., & Ross, R. (2003). What do consumers say they want and need during a psychiatric emergency? *Journal of Psychiatric Practice, 9*(1), 39-58.

Ammaniti, M., Speranza, A. M., & Candelori, C. (1996). Stability of attachment in children and intergenerational transmission of attachment. *Psychiatria dell'Infanzia e del' Adolscenza, 63*, 313-332.

Ammaniti, M., van, I. M. H., Speranza, A. M., & Tambelli, R. (2000). Internal working models of attachment during late childhood and early adolescence: an exploration of stability and change. *Attachment & Human Development, 2*(3), 328-346.

Amone-P' Olak, K. G., N. & Kraaij, V. (2007). Adolescents caught between fires: Cognitive emotion regulation in response to war experiences in Northern Uganda. . *Journal of Adolescence, 30*, 655-669.

Anderson, K., Ramo, D., Schulte, M., Cummins, K., & Brown, S. (2008). Impact of relapse predictors on psychosocial functioning of SUD youth one year after treatment.

Aneshensel, C. S. (2009). Toward explaining mental health disparities. *Journal of Health & Social Behavior, 50*(4), 377-394.

Angell, B., & Test, M. A. (2002). The relationship of clinical factors and environmental opportunities to social functioning in young adults with schizophrenia. *Schizophrenia Bulletin, 28*(2), 259-271.

Angell, B., & Test, M. A. (2002). The relationship of clinical factors and environmental opportunities to social functioning in young adults with schizophrenia. *Schizophrenia Bulletin, 28*(2), 259-271.

Appleyard, K., Egeland, B., & Sroufe, L. A. (2007). Direct social support for young high risk children: Relations with behavioral and emotional outcomes across time. *Journal of Abnormal Child Psychology, 35*, 443-457.

Apter, A., Gothelf, D., Offer, R., Ratzoni, G., Orbach, I., Tyano, S., et al. (1997). Suicidal adolescents and ego defense mechanisms. *Journal of the American Academy of Child & Adolescent Psychiatry, 36*(11), 1520-1527.

Armsden, G. C., McCauley, E., Greenber, M.Y., Burke, P.M. & Mitchell, J.R. (1990). Parent and peer attachment in early adolescent depression. *Journal of Abnormal Child Psychology, 18*(6), 683-697.

Arnott, B., & Meins, E. (2007). Links among antenatal attachment representations, postnatal mind-mindedness, and infant attachment security: A preliminary study of mothers and fathers. *Bulletin of the Menninger Clinic, 71 (2)*, 132-149.

Aseltine, Jr., Gore, S., & Colten, M. (1994). Depression and the social developmental context of adolescence. Journal of Personality and Social Psychology, Vol 67(2), 252-263.

Ayer, L., & Hudziak, J. J. (2009). Socioeconomic risk for psychopathology: the search for causal mechanisms. *Journal of the American Academy of Child & Adolescent Psychiatry, 48*(10), 982-983.

Bachar, E., Canetti, L., Galilee-Weisstub, E., Kaplan-DeNour, A., & Shalev, A. Y. (1998). Childhood vs. adolescence transitional object attachment, and its relation to mental health and parental bonding. *Child Psychiatry and Human Development, 28 (3)*, 149-165.

Bakermans-Kranenburg, M. J. (2006). Script-like attachment representations: steps towards a secure base for further research. *Attachment & Human Development, 8*(3), 275-281.

Bakermans-Kranenburg, M. J., & van IJzendoorn, M. H. (1993). A psychometric study of the Adult Attachment Interview: reliability and discriminant validity. *Developmental Psychology, 29*, 870-879.

Bakermans-Kranenburg, M. J., & van IJzendoorn, M. H. (2007). Research Review: genetic vulnerability or differential susceptibility in child development: the case of attachment. *Journal of Child Psychology & Psychiatry & Allied Disciplines, 48*(12), 1160-1173.

Bakermans-Kranenburg, M. J., & van IJzendoorn, M. H. (2009). The first 10,000 Adult Attachment Interviews: distributions of adult attachment representations in clinical and non-clinical groups. *Attachment & Human Development, 11*(3), 223-263.

Bakermans-Kranenburg, M. J., & van IJzendoorn, M. H. (2009). The first 10,000 Adult Attachment Interviews: Distributions of adult attachment representations in clinical and non-clinical groups. *Attachment and Human Development, 11*(3), 223-263.

Bakermans-Kranenburg, M. J., & Van IJzendoorn, M. H. (2009). No reliable gender differences in attachment across the lifespan. *Behavioral and Brain Sciences, 32*(1), 22-23.

Bakermans-Kranenburg, M. J., van IJzendoorn, M. H., & Juffer, F. (2003). Less is more: meta-analyses of sensitivity and attachment interventions in early childhood. *Psychological Bulletin, 129*(2), 195-215.

Bakker, M. P., Ormel, J., Verhulst, F. C., & Oldehinkel, A. J. (2011). Adolescent family adversity and mental health problems: The role of adaptive self-regulation capacities. The TRAILS study. *Journal of Abnormal Child Psychology: An official publication of the*

International Society for Research in Child and Adolescent Psychopathology, 39(3), 341-350.

Ballon, J. S., Kaur, T., Marks, II, & Cadenhead, K. S. (2007). Social functioning in young people at risk for schizophrenia. *Psychiatry Research, 151*(1-2), 29-35.

Bamford, B., Halliwell, E., Bamford, B. & Halliwell, E. (2009). Investigating the role of attachment in social comparison theories of eating disorders within a non-clinical female population. *European Eating Disorders Review, 17*(5), 371-379.

Baron-Cohen, S. (1995). *Mindblindness: an essay on autism and theory of mind.* Boston: MIT Press/ Bradford Books.

Barrera, M., Jr. (1986). Distinctions between social support concepts, measures and models. *American Journal of Community Psychology, 14*, 413-445.

Bartholomew, K., & Shaver, P.R. (1998). Methods of assessing adult attachment: Do they converge? In J. A. Simposon & W. S. Rholes (Eds.), *Attachment theory and close relationships.* (pp. 25-45). New York: Guildford Press.

Bartholomew, K., Cobb, R. J., & Poole, J. (1997). Adult attachment patterns and social support processes. In G. R. Pierce, B. Lakey, I. Sarason & B. Sarason (Eds.), *Sourcebook of social support and personality* (pp. 359-378). New York: Plenum.

Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: a test of a four-category model. *Journal of Personality & Social Psychology, 61*(2), 226-244.

Bateman, A., & Fonagy, P. (2004). *Psychotherapy for borderline personality disorder: mentalization based treatment.* Oxford: Oxford University Press.

Bateman, A., & Fonagy, P. (2006). *Mentalization -Based Treatment for Borderline Personality Disorder: A Practical Guide*. Oxford: Oxford University Press.

Bateman, A., & Fonagy, P. (2008). 8-Year follow-up of patients treated for borderline personality disorder: Mentalization-based treatment versus treatment as usual. *American Journal of Psychiatry, 165 (5)*, 631-638.

Bateman, A., & Fonagy, P. (2009). Randomized controlled trial of outpatient mentalization-based treatment versus structured clinical management for borderline personality disorder. *American Journal of Psychiatry, 166 (12)*, 1355-1364.

Bateman, A., & Fonagy, P. (2010). Mentalization based treatment for borderline personality disorder. *World Psychiatry, 9 (1)*, 11-15.

Bateman, A. W., & Fonagy, P. (2003). The development of an attachment-based treatment program for borderline personality disorder. *Bulletin of the Menninger Clinic, 67 (3)*, 187-211.

Bateman, A. W., Ryle, A., Fonagy, P., & Kerr, I. B. (2007). Psychotherapy for borderline personality disorder: Mentalization based therapy and cognitive analytic therapy compared. *International Review of Psychiatry, 19 (1)*, 51-62.

Beardslee, W. R., Chien, P. L., & Bell, C. C. (2011). Prevention of mental disorders, substance abuse, and problem behaviors: A developmental perspective. *Psychiatric Services, 62*(3), 247-254.

Beck, A. T. (1987). Cognitive models of depression. *Journal of Cognitive Psychotherapy, 1*, 5-37.

Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *Manual for Beck Depression Inventory II*. San Antonio: The Psychological Corporation.

Beck, J. G., Grant, D. M., Clapp, J. D., & Palyo, S. A. (2009). Understanding the interpersonal impact of trauma: contributions of PTSD and depression. *Journal of Anxiety Disorders, 23*(4), 443-450.

Beijersbergen, M. D., Bakermans-Kranenburg, M. J., van IJzendoorn, M. H., & Juffer, F. (2008). Stress regulation in adolescents: physiological reactivity during the adult attachment interview and conflict interaction. *Child Development, 79*(6), 1707-1720.

Beitchman, J., Adlaf, E., Atkinson, L., Douglas, L., Massak, A., & Kenaszchuk, C. (2005). Psychiatric and substance use disorders in late adolescence: The role of risk and perceived social support.

Benoit, D., & Parker, K. C. (1994). Stability and transmission of attachment across three generations. *Child Development, 65*(5), 1444-1456.

Benoit, M., Bouthillier, D., Moss, E., Rousseau, C., & Brunet, A. (2010). Emotion regulation strategies as mediators of the association between level of attachment security and PTSD symptoms following trauma in adulthood. *Anxiety, Stress, & Coping, 23*(1), 101-118.

Bentler, P. M. (2007). On tests and indices for evaluating structural models. *Personality and Individual Differences, 42*, 825-829.

Berger, L. E., Jodl, K.M., Allen, J.P. & McElhaney Davidson, B. (2005). When adolescents disagree with others about their symptoms: Differences in attachment organisation as an explanation of discrepancies between adolescent, parent and peer reports of behavior problems. *Developmental Psychopathology, 17*(2), 509-528.

Bergeron, L., Valla, J. P., Smolla, N., Piche, G., Berthiaume, C., & St-Georges, M. (2007). Correlates of depressive disorders in the Quebec general population 6 to 14 years of age. *Journal of Abnormal Child Psychology, 35*, 459-474.

Besoain, C., & Santelices, M. P. (2009). Intergenerational transmission of attachment and reflective function: A revision. [Spanish]. *Terapia Psicologica, 27 (1)*, 113-118.

Blehar, M. C., Lieberman, A. F., & Ainsworth, M. (1977). Early face-to-face interaction and its relation to later infant-mother attachment. *Child Development, 48*, 182-194.

Bleiberg, E., Rossouw, T., & sharp, C. (2011). Mentalization based treatment for adolescents: A framework to treat adolescent breakdown and emerging personality disorders. In P.Fonagy & A. Bateman (Eds.), *Handbook of mentalizing in mental health practice.* Washington DC: American Psychiatric Publishing Press.

Blos, P. (1967). The second individuation process of adolescence. *Psychoanalytic Study of the Child, 22,* 162-186.

Bogels, S. M., Brechman-Toussaint, M. L., Bogels, S. M., & Brechman-Toussaint, M. L. (2006). Family issues in child anxiety: attachment, family functioning, parental rearing and beliefs. *Clinical Psychology Review, 26*(7), 834-856.

Borg, J., Christie, D., Coen, P. G., Booy, R., & Viner, R. M. (2009). Outcomes of meningococcal disease in adolescence: prospective, matched-cohort study. *Paediatrics, 123*(3), 502-509.

Bosmans, G., Braet, C., & Van Vlierberghe, L. (2010). Attachment and symptoms of psychopathology: Early maladaptive schemas as a cognitive link? *Clinical Psychology & Psychotherapy, 17*(5), 374-385.

Bosquet, M., & Egeland, B. (2006). The development and maintenance of anxiety symptoms from infancy through adolescence in a longitudinal sample. *Development and Psychopathology, 18 (2),* 517-550.

Bouchard, M. A., Target, M., Lecours, S., Fonagy, P., Tremblay, L. M., Schachter, A., et al. (2008). Mentalization in Adult Attachment Narratives: Reflective Functioning, Mental States, and Affect Elaboration Compared. *Psychoanalytic Psychology, 25 (1),* 47-66.

Bovier, P., Chamot, E., & Perneger, T. (2004). Perceived stress, internal resources, and social support as determinants of mental health among young adults.

Bowlby, J. (1969/1982). *Attachment. Attachment and Loss volume 1*. London: Hogarth Press.

Bowlby, J. (1977). The making and breaking of affectional bonds. II. Some principles of psychotherapy. The fiftieth Maudsley Lecture. *British Journal of Psychiatry, 130,* 421-431.

Bowlby, J. (1979). *Separation: Anxiety and Anger. Attachment and Loss volume 2*. London: Hogarth Press.

Bowlby, J. (1980). *Loss: Sadness and Depression. Attachment and Loss volume 3.* London: Hogarth Press.

Boydell, K., Gladstone, B., & Volpe, T. (2006). Understanding help seeking delay in the prodrome to first episode psychosis: A secondary analysis of the perspectives of young people.

Brausch, A. M., & Gutierrez, P. M. (2010). Differences in non-suicidal self-injury and suicide attempts in adolescents. *Journal of Youth & Adolescence, 39*(3), 233-242.

Brennan, K. A., Clark, C.L., & Shaver P. R. (1998). Self-report measurement of adult attachment: An integrative overview. . In J.A.Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships.* (pp. 46-76). New York: Guildford Press.

Brent, B. (2009). Mentalization-based psychodynamic psychotherapy for psychosis. *Journal of Clinical Psychology, 65 (8),* 803-814.

Bretherton, I. (1992). Attachment and bonding: From ethological to representational and sociological perspectives. In V. B. V. Hasselt & M. Herson (Eds.), *Handbook of social*

development (pp. 133-155). New York: Plenum.

Brewin, C. R., Andrews, B., & Valentine, J. D. (2000). Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *Journal of Consulting & Clinical Psychology, 68*(5), 748-766.

Broadhead, W. E., Kaplan, B. H., James, S. A., Wagner, E. H., Schoenbach, V. J., Grimson, R., et al. (1983). The epidemiologic evidence for a relationship between social support and health. *American Journal of Epidemiology, 117*(5), 521-537.

Broberg, A. G. (2001). Can attachment theory, and attachment research methodologies, help children and adolescents in mental health institutions? *Attachment & Human Development, 3*(3), 330-338.

Brown, A. M., & Whiteside, S. P. (2008). Relations among perceived parental rearing behaviors, attachment style, and worry in anxious children. *Journal of Anxiety Disorders, 22*(2), 263-272.

Brown, E. J. (2003). Child physical abuse: risk for psychopathology and efficacy of interventions. [Review]. *Current psychiatry reports, 5 (2)*, 87-94.

Brown, G. W., & Harris, T. O. (1989). Depression. In T.O Harris & G.W. Brown (Ed.), *Life events and illness* (pp. 49-93). London: Guildford.

Brown, L. S., & Wright, J. (2003). The relationship between attachment strategies and psychopathology in adolescence. *Psychology & Psychotherapy: Theory, Research & Practice, 76*(Pt 4), 351-367.

Brugha, T. S. (1995). Social support and psychiatric disorder: overview of evidence. In T. S. Brugha (Ed.), *Social Support and Psychiatric Disorder: Research Findings and Guidelines for Clinical Practice*. Cambridge: Cambridge University Press.

Brugha, T. S., Bebbington, P. E., Stretch, D. D., MacCarthy, B., & Wykes, T. (1997). Predicting the short-term outcome of first episodes and recurrences of clinical depression: a prospective study of life events, difficulties, and social support networks. *Journal of Clinical Psychiatry, 58*(7), 298-306.

Burba, B., Oswald, R., Grigaliunien, V., Neverauskiene, S., Jankuviene, O., & Chue, P. (2006). A controlled study of alexithymia in adolescent patients with persistent somatoform pain disorder. *Canadian Journal of Psychiatry - Revue Canadienne de Psychiatrie, 51*(7), 468-471.

Burns, J. M., Davenport, T. A., Durkin, L. A., Luscombe, G. M., & Hickie, I. B. (2010). The internet as a setting for mental health service utilisation by young people. *Medical Journal of Australia, 192*(11 Suppl), S22-26.

Caffo, E., Forresi, B., & Lievers, L. (2005). Impact, psychological sequelae and management of trauma affecting children and adolescents.

Caffo, E., Forresi, B., & Lievers, L. (2005). Impact, psychological sequelae and management of trauma affecting children and adolescents.

Candelori, C., & Ciocca, A. . (1998). Attachment and eating disorders. In P. Bria, A. Ciocca

& S. D. Risio (Eds.), *Psychotherapeutic issues in eating disorders: Models, methods and results* (pp. 139-153). Rome: Societa Editrice Universo.

Carlson, E. A. (1998). A prospective longitudinal study of attachment disorganisation/disorientation. *Child Development, 69 (4)*, 1107-1128.

Carlson, E. A., Jacobvitz, D., & Sroufe, L. A. (1995). A developmental investigation of inattentiveness and hyperactivity. *Child Development, 66*(1), 37-54.

Carruthers, P. (1996). Simulation and self-knowledge: a defence of the theory-theory. In P. Carruthers & P. K. Smith (Eds.), *Theories of Theories of Mind* (pp. 22-38). Cambridge: Cambridge University Press.

Carthy, T., Horesh, N., Apter, A., Edge, M. D., & Gross, J. J. (2010). Emotional reactivity and cognitive regulation in anxious children. *Behaviour Research & Therapy, 48*(5), 384-393.

Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: a theoretically based approach. *Journal of Personality & Social Psychology, 56*(2), 267-283.

Cassidy, J. (1995). Attachment and generalised anxiety disorder. In D.Cicchetti & S. L. Toth (Eds.), *Rochester symposium on developmental psychopathology.* (Vol. 6, pp. 343-370). Rochester NY: University of Rochester Press.

Cassidy, J., & Berlin, L. J. (1994). The insecure/ambivalent pattern of attachment: theory and research. *Child Development, 65*(4), 971-991.

Cassidy, J., Kirsh, S. J., Scolton, K. L., & Parke, R. D. (1996). Attachment and representations of peer relationships. *Developmental Psychology, 32*, 892-904.

Cassidy, J., & Mohr, J. J. (2001). Unsolvable fear, trauma, and psychopathology: Theory, research, and clinical considerations related to disorganised attachment across the life span. *Clinical Psychology: Science and Practice, 8*(3), 275-298.

Cassidy, J., Ziv, Y., Mehta, T. G., & Feeney, B. C. (2003). Feedback seeking in children and adolescents: associations with self-perceptions, attachment representations, and depression. *Child Development, 74*(2), 612-628.

Castelain S, Bruggerman S, van Busschbach JT, Gaag M, Stant AD, Knegtering H, et al. (2008). The effectiveness of peer support groups in psychosis: a randomized controlled trial. *Acta Psychiatr Scand 118*(62-74).

Champion, L. (1990). The relationship between social vulnerability and the occurrence of severely threatening life events. *Psychological Medicine, 20*(1), 157-161.

Champion, L. (1995). A developmental perspective on social support. In B. T.S. (Ed.), *Social Support and Psychiatric Disorder: Research Findings and Guidelines for Clinical Practice.* (pp. 61-95). Cambridge: Cambridge University Press.

Champion, L. A., Goodall, G., & Rutter, M. (1995). Behaviour problems in childhood and stressors in early adult life. I. A 20 year follow-up of London school children. *Psychological Medicine, 25*(2), 231-246.

Chanen, A., Jovev, M., & Jackson, H. (2007). Adaptive functioning and psychiatric symptoms in adolescents with borderline personality disorder.

Chapman, M. V. (2003). Social Support and Loss During Adolescence: How Different Are Teen Girls from Boys? *Journal of Human Behavior in the Social Environment, 7*(3-4), 5-21.

Chen, H., Cohen, P., Johnson, J. G., & Kasen, S. (2009). Psychiatric disorders during adolescence and relationships with peers from age 17 to age 27. *Social Psychiatry and Psychiatric Epidemiology, 44*(3), 223-230.

Cheng, S., & Chan, A. (2004). The multidimensional scale of perceived social support: dimensionality and age and gender differences in adolescents. *Personality and Individual Differences, 37*, 1359-1369.

Ciarrochi, J., Wilson, C., Deane, F., & Rickwood, D. (2003). Do difficulties with emotions inhibit help-seeking in adolescence? The role of age and emotional competence in predicting help-seeking intentions.

Cicchetti, D., Cummings, E.M., Greenberg, M.T., & Marvin, R.S. (1990). An organisational perspective on attachment beyond infancy: Implications for theory, measurement, and research. In M. T. Greenberg, D. Cicchetti & E. M. Cummings (Eds.), *Attachment in the preschool years: Theory, research and intervention* (pp. 3-49). Chicago: University of Chicago.

Cicchetti, D., & Cohen, D. (1995). Perspectives on developmental psychopathology. In D. Cicchetti & D. J. Cohen (Eds.), *Developmental psychopathology: Theory method* (Vol. 1, pp. 3-20). New York: wiley.

Cloitre, M., Stovall-McClough, C., Zorbas, P., & Charuvastra, A. (2008). Attachment organisation, emotion regulation, and expectations of support in a clinical sample of women with childhood abuse histories. *Journal of Traumatic Stress, 21*(3), 282-289.

Cohen, A., Hammen, C., Henry, R., & Daley, S. . (2004). Effects of stress and social support on recurrence in bipolar disorder. *Journal of Affective Disorders, 82*, 143-147.

Cohen, S., & Pressman, S. (2004). The stress-buffering hypothesis. In N.Anderson (Ed.), *Encyclopedia of Health and Behaviour*. Thousand Oaks CA: Sage Publications.

Cohen, S., & Syme, S. L. (1985). Issues in the study and application of social support. In S. Cohen & S. L. Syme (Eds.), *Social Support and Health* (pp. 3-22). New York: Academic Press.

Cohen, S., Underwood, L. G., & Gottlieb, B. H. (2000). *Social Support Measurement and Intervention*. New York: Oxford University Press.

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98*(2), 310-357.

Cole, D. A., Martin, J. M., Powers, B., & Truglio, R. (1996). Modelling causal relations between academic and social competence and depression: a multitrait-multimethod longitudinal study of children. *Journal of Abnormal Psychology, 105*(2), 258-270.

Cole, P. M., & Deater-Deckard, K. (2009). Emotion regulation, risk, and psychopathology.

Journal of Child Psychology & Psychiatry & Allied Disciplines, 50(11), 1327-1330.

Cole, P. M., Michel, M. K., & Teti, L. O. (1994). The development of emotion regulation and dysregulation: a clinical perspective. *Monographs of the Society for Research in Child Development, 59*(2-3), 73-100.

Cole-Detke, H., & Kobak, R. (1996). Attachment processes in eating disorder and depression. *Journal of Consulting & Clinical Psychology, 64*(2), 282-290.

Collins, N. L., & Allard, L. M. (2001). Cognitive representations of attachment: The content and function of internal working models. In G. J. O. Fletcher & M. S. Clark (Eds.), *Blackwell Handbook of Social Psychology: Vol 2. Interpersonal Processes.* Oxford, UK: Blackwell.

Collins, N. L., & Feeney, B. C. (2000). A safe haven: an attachment theory perspective on support seeking and caregiving in intimate relationships. *Journal of Personality & Social Psychology, 78*(6), 1053-1073.

Collins, N. L., & Read, S. J. (1990). Adult attachment, working models, and relationship quality in dating couples. *Journal of Personality & Social Psychology, 58*(4), 644-663.

Collins, N. L. F. B. C. (2004). Working models of attachment shape perceptions of social support: Evidence from experimental and observational studies. *Journal of Personality and Social Psychology, 87*(3), 363-383.

Colucci, E., & Martin, G. (2007). Ethnocultural aspects of suicide in young people: A systematic literature review part 2: Risk factors, precipitating agents, and attitudes toward suicide.

Compas, B. E. (1987). Coping with stress during childhood and adolescence. *Psychological Bulletin, 101*(3), 393-403.

Compas, B. E. (2009). Coping, regulation, and development during childhood and adolescence. *New Directions for Child & Adolescent Development, 2009*(124), 87-99.

Cooper, M., Shaver, P. R., & Collins, N. L. (1998). Attachment styles, emotion regulation, and adjustment in adolescence. *Journal of Personality and Social Psychology, 74*(5), 1380-1397.

Coplan, J. D., Rosenblum, L. A., & Gorman, J. M. (1995). Primate models of anxiety. Longitudinal perspectives. *Psychiatric Clinics of North America, 18*(4), 727-743.

Coyne, J. C., & Downey, G. (1991). Social factors and psychopathology: stress, social support, and coping processes. *Annual Review of Psychology, 42*, 401-425.

Crawford, T. N., Shaver, P. R., Cohen, P., Pilkonis, P. A., Gillath, O., & Kasen, S. (2006). Self-reported attachment, interpersonal aggression, and personality disorder in a prospective community sample of adolescents and adults. *Journal of Personality Disorders, 20 (4)*, 331-351.

Crittenden, P. (1992). Treatment of anxious attachment in infancy and early childhood. *Developmental Psychopathology, 4*, 209-241.

Crittenden, P. (1997). Truth, error, omission, distortion and deception. In S. M. C. Dollinger & L. D. D. Lalla (Eds.), *Assessment and Intervention Issues Across the Lifespan* (pp. 35-76). Mahwah, NJ: Erlbaum.

Crowell, J., Fraley, C., & Shaver, P. (1999). Measurement of individual differences in adolescent and adult attachment. In J. Cassidy & P.Shaver (Eds.), *The Handbook of Attachment; Theory, Research and Clinical Implications*. New York: Guildford Press.

Crowell, J. A. (2003). Assessment of attachment security in a clinical setting: Observations of parents and children. *Journal of Developmental and Behavioral Paediatrics, 24*(3), 199-204.

Crowell, J. A., Waters, E., Treboux, D., O'Connor, E. O., Colon-Downs, C., Feider, O., et al. (1996). Discriminant validity of the adult attachment interview. *Child Development, 67*(5), 2584-2599.

Cummings, E. (1990). Towards a transactional model of relations between attachment and depression. In M. Greenburgh, C. D & E.M.Cummings (Eds.), *Attachment in the preschool years: Theory, research, and intervention* (pp. 339-372). Chicago: The University of Chicago Press.

Davidson, M., Reichenberg, A., Rabinowitz, J., Weiser, M., Kaplan, Z., & Mark, M. (1999). Behavioral and intellectual markers for schizophrenia in apparently healthy male adolescents. *American Journal of Psychiatry, 156*(9), 1328-1335.

Del Carmen, R., & Huffman, L. (1996). Epilogue: Bridging the gap between research on attachment and psychopathology. *Journal of Consulting and Clinical Psychology, 64 (2)*, 291-294.

del Valle, J. F., Bravo, A., & Lopez, M. (2010). Parents and peers as providers of support in adolescent's social network: A developmental perspective. *Journal of Community Psychology, 38*(1), 16-27.

Demers, I., Bernier, A., Tarabulsy, G. M., & Provost, M. A. (2010). Maternal and child characteristics as antecedents of maternal mind-mindedness. *Infant Mental Health Journal, 31 (1)*, 94-112.

Denham, S. A., Wyatt, T. M., Bassett, H. H., Echeverria, D., & Knox, S. S. (2009). Assessing social-emotional development in children from a longitudinal perspective. *Journal of Epidemiology & Community Health, 63 Suppl 1*, i37-52.

Dennett, D. (1978). *Brainstorms: Philosophical Essays on Mind and Psychology.* Montgomery, VT: Bradford.

Dennett, D. (1987). *The Intentional Stance*. Cambridge MA: MIT Press.

Dennett, D. (1988). Precis of "The intentional stance" with peer commentary. *The Behavioual and Brain Sciences, 11*, 495-546.

DeOliveira, C. A., Bailey, H., Moran, G., & Pederson, D. (2004). Emotion Socialization as a Framework for Understanding the Development of Disorganised Attachment. *Social Development, 13*(3), 437-467.

Dewitte, M., Koster, E. H., De Houwer, J., Buysse, A., Dewitte, M., Koster, E. H. W., et al. (2007). Attentive processing of threat and adult attachment: a dot-probe study. *Behaviour Research & Therapy, 45*(6), 1307-1317.

Diamond, D., Stovall-McClough, C., Clarkin, J. F., & Levy, K. N. (2003). Patient-therapist attachment in the treatment of borderline personality disorder. *Bulletin of the Menninger Clinic, 67 (3)*, 227-259.

Dimitrova, N., Pierrehumbert, B., Glatz, N., Torrisi, R., Heinrichs, M., Halfon, O., et al. (2010). Closeness in relationships as a mediator between sexual abuse in childhood or adolescence and psychopathological outcome in adulthood. *Clinical Psychology & Psychotherapy, 17 (3)*, 183-195.

Dishion, T. J. (2000). Cross-setting consistency in early adolescent psychopathology: Deviant friendships and problem behavior sequelae. *Journal of Personality, 68*(6), 1109-1126.

Diwo, R. (1999). Life events and the fragility of mentalization: A comparative approach in suicidal adolescent. [French]. *Neuropsychiatrie de l'Enfance et de l'Adolescence, 47 (4)*, 200-214.

Dodge, K. A. (1980). Social cognition and children's aggressive behavior. *Child Development, 51*(1), 162-170.

Dozier, M. (1990). Attachment organisation and treatment use for adults with serious psychopathological disorders. *Development & Psychopathology, 2*, 47-60.

Dozier, M., & Lee, S. W. (1995). Discrepancies between self and other report of psychiatric symptomatology: Effects of dismissing attachment strategies. *Development and Psychopathology, 3*, 457-489.

Dozier, M., Stovall, K. & Albus, K.E. (1999). Attachment and psychopathology in adulthood. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research and clinical application.* (pp. 497-519). New York: Guildford.

Dozier, M., Chase Stovall-McClough, K., & Albus, K. E. (2008). Attachment and psychopathology in adulthood. In J.Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research and clinical application (2nd edition).* New York: Guildford.

DuBois, D. L., & Silverthorn, N. (2005). Natural mentoring relationships and adolescent health: evidence from a national study. *American Journal of Public Health, 95*(3), 518-524.

DuBois, D. L., & Silverthorn, N. (2005). Natural mentoring relationships and adolescent health: evidence from a national study. *American Journal of Public Health, 95*(3), 518-524.

Durant, R., Knight, J., & Goodman, E. (1997). Factors associated with aggressive and delinquent behaviors among patients attending an adolescent medicine clinic.

Dykas, M. J., & Cassidy, J. (2007). Attachment and the processing of social information in adolescence. *New Directions for Child and Adolescent Development, 117*, 41-56.

Dykas, M. J., Woodhouse, S. S., Cassidy, J., & Waters, H. S. (2006). Narrative assessment of attachment representations: links between secure base scripts and adolescent attachment.

Attachment & Human Development, 8(3), 221-240.

Eizirik, M., & Fonagy, P. (2009). Mentalization-based treatment for patients with borderline personality disorder: An overview. [Portuguese]. *Revista Brasileira de Psiquiatria, 31 (1)*, 72-75.

Esposito, C., Spirito, A., Boergers, J., & Donaldson, D. (2003). Affective, behavioral, and cognitive functioning in adolescents with multiple suicide attempts. *Suicide & Life-Threatening Behavior, 33*(4), 389-399.

Fagg, J., Curtis, S., Stansfeld, S., Cattell, V., Tupuola, A., & Arephin, M. (2008). Area social fragmentation, social support for individuals and psychosocial health in young adults: Evidence from a national survey in England.

Falci, C., & McNeely, C. (2009). Too many friends: social integration, network cohesion and adolescent depressive symptoms. *Social Forces, 87*(4), 2031-2061.

Feeney, J. A., Noller, P., & Hanrahan, M. (1994). Assessing adult attachment: developments in the conceptualization of security and insecurity. In M. B. Sperling & W. H. Berman (Eds.), *Attachment in adults: theory, assessment, and treatment.* (pp. 128-152). New York: Guildford Press.

Fergusson, D. M., Woodward, L. J., & Horwood, L. J. (2000). Risk factors and life processes associated with the onset of suicidal behaviour during adolescence and early adulthood. *Psychological Medicine, 30 (1)*, 23-39.

Fikke, L., Melinder, A., & Landro, N. (2011). Executive functions are impaired in adolescents engaging in non-suicidal self-injury. *Psychological Medicine: A Journal of Research in Psychiatry and the Allied Sciences, 41*(3), 601-610.

Fischer-Kern, M., Schuster, P., Kapusta, N. D., Tmej, A., Buchheim, A., Rentrop, M., et al. (2010). The relationship between personality organisation, reflective functioning, and psychiatric classification in borderline personality disorder. *Psychoanalytic Psychology, 27 (4)*, 395-409.

Fischer-Kern, M., Tmej, A., Kapusta, N. D., Naderer, A., Leithner-Dziubas, K., Loffler-Stastka, H., et al. (2008). The capacity for mentalization in depressive patients: A pilot study. [German]. *Zeitschrift fur Psychosomatische Medizin und Psychotherapie, 54 (4)*, 368-380.

Florian, V., Mikulincer, M., & Bucholtz, I. (1995). Effects of adult attachment style on the perception and search for social support. *Journal of Psychology, 129*(6), 665-676.

Fonagy, P. (1991). Thinking about thinking: some clinical and theoretical considerations in the treatment of a borderline patient. *International Journal of Psycho-Analysis, 72*(Pt 4), 639-656.

Fonagy, P., Steele, M., Steele, H. & Target, M. (1998). Reflective-function manual: version 5.0. For application to the Adult Attachment Interview. . *Unpublished manuscript*.

Fonagy, P. (2000). Attachment and borderline personality disorder. *Journal of the American Psychoanalytic Association, 48 (4)*, 1129-1146; discussion 1175-1187.

Fonagy, P., & Bateman, A. (2008). The development of borderline personality disorder - A

mentalizing model. *Journal of Personality Disorders, 22 (1),* 4-21.

Fonagy, P., & Bateman, A. W. (2006). Mechanisms of change in mentalization-based treatment of BPD. *Journal of Clinical Psychology, 62 (4),* 411-430.

Fonagy, P., & Bateman, A. W. (2007). Mentalizing and borderline personality disorder. *Journal of Mental Health, 16 (1),* 83-101.

Fonagy, P., Bateman, A. & Bateman, A. (2011). The widening scope of mentalizing: A discussion. *Psychology and Psychotherapy: Theory, Research and Practice, 84 (1)* 98-110

Fonagy, P., Gergely, G., Jurist, E. L., & Target, M. (2004). *Affect Regulation, Mentalization and the Development of the Self*. London: Karnac Ltd.

Fonagy, P., Gergely, G., & Target, M. (2007). The parent-infant dyad and the construction of the subjective self. [Review]. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 48 (3-4),* 288-328.

Fonagy, P., & Luyten, P. (2009). A developmental, mentalization-based approach to the understanding and treatment of borderline personality disorder. *Development and Psychopathology, 21 (4),* 1355-1381.

Fonagy, P., Luyten, P., & Strathearn, L. (2011). Borderline personality disorder, mentalization, and the neurobiology of attachment. *Infant Mental Health Journal, 32 (1),* 47-69.

Fonagy, P., & Moran, G. S. (1991). Understanding psychic change in child psychoanalysis. *International Journal of Psycho-Analysis, 72*(Pt 1), 15-22.

Fonagy, P., Steele, H., Moran, G., Steele, M., & Higgitt, A. (1991). The capacity for understanding mental states: The reflective self in parent and child and its significance for security of attachment. *Infant Mental Health Journal, 12*, 200-217.

Fonagy, P., Steele, H., & Steele, M. (1991). Maternal representations of attachment during pregnancy predict the organisation of infant-mother attachment at one year of age. *Child Development, 62*(5), 891-905.

Fonagy, P., Steele, M., Steele, H., Higgitt, A., & Target, M. (1994). The Emanuel Miller Memorial Lecture 1992. The theory and practice of resilience. *Journal of Child Psychology and Psychiatry & Allied Disciplines, 35*, 231-257.

Fonagy, P., Steele, M., Steele, H., Leigh, T., Kennedy, R., Mattoon, G., et al. (1995). Attachment, the reflective self and borderline states: The predictive specificity of the Adult Attachment Interview and pathological emotional development. In S. Goldberg, R. Muir & J. Kerr (Eds.), *Attachment Theory: Social, Developmental and Clinical Perspectives.* (pp. 223-279). Hillsdale, NJ: analytic Press.

Fonagy, P., & Target, M. (1997). Attachment and reflective function: their role in self-organisation. *Development and Psychopathology, 9 (4),* 679-700.

Fonagy, P., & Target, M. (2002). Early intervention and the development of self regulation. *Psychoanalytic Enquiry, 22*, 307-335.

Fonagy, P., & Target, M. (2005). Bridging the transmission gap: At end to an important mystery of attachment research? *Attachment and Human Development, 7 (3)*, 333-343.

Fonagy, P., & Target, M. (2006). The mentalization-focused approach to self pathology. *Journal of Personality Disorders, 20*(6), 544-576.

Fonagy, P., Target, M., Steele, H., & Steele, M. (1998). *Reflective Functioning Manual*. Unpublished manuscript. University College London. London.

Fonagy, P., Twemlow, S. W., Vernberg, E. M., Nelson, J. M., Dill, E. J., Little, T. D., et al. (2009). A cluster randomized controlled trial of child-focused psychiatric consultation and a school systems-focused intervention to reduce aggression. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 50 (5)*, 607-616.

Fortuna, K., & Roisman, G. I. (2008). Insecurity, stress, and symptoms of psychopathology: contrasting results from self-reports versus interviews of adult attachment. *Attachment & Human Development, 10*(1), 11-28.

Fortune, S., Sinclair, J., & Hawton, K. (2008). Adolescents' views on preventing self-harm.

Fossati, A., Acquarini, E., Feeney, J. A., Borroni, S., Grazioli, F., Giarolli, L. E., et al. (2009). Alexithymia and attachment insecurities in impulsive aggression. *Attachment and Human Development, 11 (2)*, 165-182.

Fraley, R. C., & Waller, N. G. (1998). Adult attachment patterns: A test of the typological model. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 77-114). New York: Guildford Press.

Frank, E., Hlastala, S., Ritenour, A., Houck, P., Tu, X. M., Monk, T. H., et al. (1997). Inducing lifestyle regularity in recovering bipolar disorder patients: results from the maintenance therapies in bipolar disorder protocol. *Biological Psychiatry, 41*(12), 1165-1173.

Friedlander, L. J., Reid, G. J., Shupak, N., & Cribbie, R. (2007). Social support, self-esteem and stress as predictors of adjustment to university among first year undergraduates. *Journal of Adolescence, 20*, 163-176.

Frost, A. K., Reinherz, H. Z., Pakiz-Camras, B., Giaconia, R. M., & Lefkowitz, E. S. (1999). Risk factors for depressive symptoms in late adolescence: a longitudinal community study. *American Journal of Orthopsychiatry, 69*(3), 370-381.

Frydenberg, E., & Lewis, R. (1993). *Adolescent Coping Scale: Administrators Manual*. Hawthorn: Australia: The Australian Council for Educational Research.

Fukui, S., Davidson, L. J., Holter, M. C., & Rapp, C. A. (2010). Pathways to recovery (PTR): impact of peer-led group participation on mental health recovery outcomes. *Psychiatric Rehabilitation Journal, 34*(1), 42-48.

Fukui, S., Davidson, L. J., & Rapp, C. A. (2010). Pathways to recovery, a peer-led group intervention. *Psychiatric Services, 61*(9), 944.

Furman, W., & Simon, V. A. (2004). Concordance in attachment states of mind and styles with respect to fathers and mothers. *Developmental Psychology, 40*(6), 1239-1247.

Furman, W., Simon, V. A., Shaffer, L., & Bouchey, H. A. (2002). Adolescents' working models and styles for relationships with parents, friends, and romantic partners. *Child Development, 73*(1), 241-255.

Garnefski, N., & Diekstra, R. F. (1996). Perceived social support from family, school, and peers: relationship with emotional and behavioral problems among adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry, 35*(12), 1657-1664.

Garnefski, N., Legerstee, J., Kraaij, V. V., Van Den Kommer, T., & Teerds, J. (2002). Cognitive coping strategies and symptoms of depression and anxiety: a comparison between adolescents and adults. *Journal of Adolescence, 25*(6), 603-611.

Garnefski, N., Rieffe, C., Jellesma, F., Terwogt, M. M., & Kraaij, V. (2007). Cognitive emotion regulation strategies and emotional problems in 9 - 11-year-old children: the development of an instrument. *European Child & Adolescent Psychiatry, 16*(1), 1-9.

Gasquet, I., Ledoux, S., Chavance, M., & Choquet, M. (1999). Consultation of mental health professionals by French adolescents with probable psychiatric problems. *Acta Psychiatrica Scandinavica, 99*(2), 126-134.

Gavazzi, S. M. (1994). Perceived social support from family and friends in a clinical sample of adolescents. *Journal of personality assessment, 62*(3), 465-471.

George, C., Kaplan, N., & Main, M. (1984/1985/1996). *Attachment Interview for Adults*. Unpublished manuscript. University of California. Berkeley.

Gifford-Smith, M., Dodge, K., Dishion, T., & McCord, J. (2005). Peer influence in children and adolescents: Crossing the bridge from developmental to intervention science.

Glick, M., & Zigler, E. (1986). Premorbid social competence and psychiatric outcome in male and female nonschizophrenic patients. *Journal of Consulting & Clinical Psychology, 54*(3), 402-403.

Goldberg, D. P. (1978). *Manual of the General Health Questionnaire*. Windsor, England: NFER Publishing.

Goldberg, R. W., Rollins, A. L., & Lehman, A. F. (2003). Social network correlates among people with psychiatric disabilities. *Psychiatric Rehabilitation Journal, 26*(4), 393-402.

Goldman, A. (1993). *Philosophical Applications of Cognitive Science*. Boulder CO: Westview Press.

Goldstein, T. R., Miklowitz, D. J., & Mullen, K. L. (2006). Social skills knowledge and performance among adolescents with bipolar disorder. *Bipolar Disorders, 8*(4), 350-361.

Goodman, R. (2001). Psychometric properties of the strengths and difficulties questionnaire. *Journal of the American Academy of Child & Adolescent Psychiatry, 40*(11), 1337-1345.

Goodwin, I., & Goodwin, I. (2003). The relevance of attachment theory to the philosophy, organisation, and practice of adult mental health care. [Review]. *Clinical Psychology Review, 23*(1), 35-56.

Gowers, S. G., Harrington, R. C., Whitton, A., Beevor, A., Lelliott, P., Jezzard, R., et al.

(1999). Health of the Nation Outcome Scales for Children and Adolescents (HoNOSCA). Glossary for HoNOSCA score sheet. *British Journal of Psychiatry, 174*, 428-431.

Gratz, K. L., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the Difficulties in Emotion Regulation Scale. *Journal of Psychopathology and Behavioral Assessment, 36*, 41-54.

Green, G., Hayes, C., Dickinson, D., Whittaker, A., & Golheany, B. (2002). The role and impact of social relationships upon well-being reported by mental health users: A qualitative study. *Journal of Mental Health, 11*(5), 565-579.

Green, J., & Goldwyn, R. (2002). Annotation: attachment disorganisation and psychopathology: new findings in attachment research and their potential implications for developmental psychopathology in childhood. *Journal of child psychology and psychiatry, and allied disciplines, 43 (7)*, 835-846.

Greenberg, M. T., Siegel, J. M., & Leitch, C. J. . (1983). The nature and importance of attachment relationships to parents and peers during adolescence. *Journal of Youth and Adolescence, 12*, 373-386.

Grienenberger, J. F., Kelly, K., & Slade, A. (2005). Maternal reflective functioning, mother-infant affective communication, and infant attachment: exploring the link between mental states and observed caregiving behavior in the intergenerational transmission of attachment. *Attachment & Human Development, 7*(3), 299-311.

Griffin, D., & Bartholomew, K. (1994(a)). Metaphysics of measurement: The case of adult attachment. In K. B. D. Perlman (Ed.), *Advances in personal relationships vol.5: Attachment processes in adulthood.* (pp. 17-52). London: Jessica Kingsley.

Griffin, D. W., & Bartholomew, K. . (1994). Models of the self and other: fundamental dimensions underlying measures of adult attachment. *Journal of Personality and Social Psychology, 67*, 430-445.

Gross, J. (1999). Emotion reulation: Past, present and future. *Cognition and Emotion, 13*(5), 551-573.

Gross, J., & Muñoz, R. F. (1995). Emotion regulation and mental health. *Clinical Psychology: Science and Practice, 2*, 151-164.

Gross, J., & Thompson, R. A. (2007). Emotion regulation: Conceptual foundations. In J.Gross (Ed.), *Handbook of Emotion Regulation* (pp. 3-26). New York: Guildford Press.

Grossman, K., Fremmer-Bombik, E., Rudolph, J., & Grossman, K.E. (1988). Maternal attachment representations as related to patterns of infant-mother attachment and maternal care during the first year. In R. A. Hinde & J. Stevenson-Hinde (Eds.), *Relationships within families: Mutual influences*. Oxford: Clarendon.

Grossman, K. E., & Grossman, K. (1991). Attachment quality as an organizer of emotional and behavioural responses in a longitudinal perspective. In C. M. Parkes, J. Stevenson-Hinde & P. Marris (Eds.), *Attachment Across the Life Cycle* (pp. 93-114). London: Routledge.

Gulliver, A., Griffiths, K., & Christensen, H. (2010). Perceived barriers and facilitators to

mental health help-seeking in young people: A systematic review.

Gumley, A., & Schwannauer, M. (2006). *Staying Well After Psychosis: A Cognitive Interpersonal Approach to Recovery and Relapse Prevention*. Chichester: John Wiley & Sons Ltd.

Guttmann-Steinmetz, S., & Crowell, J. A. (2006). Attachment and externalizing disorders: A developmental psychopathology perspective. [Review]. *Journal of the American Academy of Child and Adolescent Psychiatry, 45 (4)*, 440-451.

Hammen, C. L., Burge, D., Daley, S. E., Davila, J., Paley, B., & Rudolph, K. D. (1995). Interpersonal attachment cognitions and prediction of symptomatic responses to interpersonal stress. *Journal of Abnormal Psychology, 104*(3), 436-443.

Hankin, B. L. (2005). Childhood maltreatment and psychopathology: Prospective tests of attachment, cognitive vulnerability, and stress as mediating processes. *Cognitive Therapy and Research, 29 (6)*, 645-671.

Hankin, B. L., Gibb, B. E., Abela, J. R., & Flory, K. (2010). Selective attention to affective stimuli and clinical depression among youths: Role of anxiety and specificity of emotion. *Journal of Abnormal Psychology, 119*(3), 491-501.

Hankin, B. L., Kassel, J. D., & Abela, J. R. (2005). Adult attachment dimensions and specificity of emotional distress symptoms: prospective investigations of cognitive risk and interpersonal stress generation as mediating mechanisms. *Personality & Social Psychology Bulletin, 31*(1), 136-151.

Hanssen-Bauer, K., Heyerdahl, S., Hatling, T., Jensen, G., Olstad, P. M., Stangeland, T., et al. (2011). Admissions to acute adolescent psychiatric units: A prospective study of clinical severity and outcome. *International Journal of Mental Health Systems, 5*.

Harris, M., & Bergman, H. C. (1984). Reassessing the revolving door: a developmental perspective on the young adult chronic patient. *American Journal of Orthopsychiatry, 54*(2), 281-289.

Harris, M., & Bergman, H. C. (1984). Reassessing the revolving door: a developmental perspective on the young adult chronic patient. *American Journal of Orthopsychiatry, 54*(2), 281-289.

Hartmann, H. P. (2009). Psychoanalytic self psychology and its conceptual development in light of developmental psychology, attachment theory, and neuroscience. *Self and Systems Explorations in Contemporary Self Psychology, Annals of the New York Academy of Sciences. 1159*, 86-105.

Hatzenbuehler, M. L., Nolen-Hoeksema, S., & Dovidio, J. (2009). How does stigma "get under the skin"? The mediating role of emotion regulation. *Psychological Science, 20*(10), 1282-1289.

Hawker, D. S., & Boulton, M. J. (2000). Twenty years' research on peer victimization and psychosocial maladjustment: a meta-analytic review of cross-sectional studies. *Journal of Child Psychology & Psychiatry & Allied Disciplines, 41*(4), 441-455.

Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process.

Journal of Personality & Social Psychology, 52(3), 511-524.

Henry, A. D., & Coster, W. J. (1996). Predictors of functional outcome among adolescents and young adults with psychotic disorders. *American Journal of Occupational Therapy, 50*(3), 171-181.

Herold, R., Tenyi, T., Simon, M., & Trixler, M. (2004). The connection between mentalization deficit and pragmatic language skills and neurocognition in schizophrenia. [Hungarian]. *Neuropsychopharmacologia Hungarica: a Magyar Pszichofarmakologiai Egyesulet lapja = official journal of the Hungarian Association of Psychopharmacology, 6 (2)*, 72-78.

Hesse, E. (1999). The adult attachment interview: Historical and current perspectives. In J. Cassidy & P. Shaver (Eds.), *The Handbook of Attachment: Theory, Research and Clinical Applications* (pp. 395-432). New York: Guildford Press.

Hesse, E. (1999). The Adult Attachment Interview: protocol, method of analysis and empirical studies. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of Attachment.* (pp. 552-598). New York: The Guildford Press.

Hesse, E., & Main, M. (2000). Disorganised infant, child, and adult attachment: collapse in behavioral and attentional strategies. *Journal of the American Psychoanalytic Association, 48*(4), 1097-1127; discussion 1175-1087.

Hill, T. D., Kaplan, L. M., French, M. T., & Johnson, R. J. (2010). Victimization in early life and mental health in adulthood: an examination of the mediating and moderating influences of psychosocial resources. *Journal of Health & Social Behavior, 51*(1), 48-63.

Hoefnagels, C., Meesters, C., & Simenon, J. (2007). Social support as predictor of psychopathology in the adolescent offspring of psychiatric patients. *Journal of Child and Family Studies, 16*(1), 91-101.

Hoermann, S., Clarkin, J. F., Hull, J. W., & Fertuck, E. A. (2004). Attachment dimensions as predictors of medical hospitalizations in individuals with DSM IV cluster B personality disorders. *Journal of Personality Disorders, 18 (6)*, 595-603.

Hopkins, J. (1987). Failure of the holding relationship: Some effects of physical rejection on the child's attachment and on his inner experience. *Journal of Child Psychotherapy, 13*(1), 5-17.

Horgan, A., & Sweeney, J. (2010). Young students' use of the Internet for mental health information and support. *Journal of Psychiatric & Mental Health Nursing, 17*(2), 117-123.

Horowitz, L. M., L.E., A., Wiggins, J. S., & Pincus, A. L. (2000). *Inventory of Interpersonal Problems Manual*. USA: The Psychological Corporation.

Horowitz, L. M., Rosenberg, S. E., Baer, B. A., Ureno, G., & Villasenor, V. S. (1988). Inventory of interpersonal problems: psychometric properties and clinical applications. *Journal of Consulting & Clinical Psychology, 56*(6), 885-892.

Hou, S. Y., Yen, C. F., Huang, M. F., Wang, P. W., & Yeh, Y. C. (2010). Quality of life and its correlates in patients with obsessive-compulsive disorder. *Kaohsiung Journal of Medical Sciences, 26*(8), 397-407.

Hu, L., & Bentler, P. M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods, 3,* 424–453.
Hu, L., & Bentler, P. (1999). Cut-off criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. . *Structural Equation Modelling, 6,* 1-55.

Huang, C. Y., Sousa, V. D., Tsai, C. C., & Hwang, M. Y. (2008). Social support and adaptation of Taiwanese adults with mental illness. *Journal of Clinical Nursing, 17*(13), 1795-1802.

Hunter, E. C., Katz, L. F., Shortt, J. W., Davis, B., Leve, C., Allen, N. B., et al. (2011). How do I feel about feelings? Emotion socialization in families of depressed and healthy adolescents. *Journal of Youth and Adolescence, 40*(4), 428-441.

Ikiz, F. E., & Cakar, F. S. (2010). Perceived social support and self-esteem in adolescence. *Procedia - Social and Behavioral Science, 5,* 2238-2342.

Irons, C., & Gilbert, P. (2005). Evolved mechanisms in adolescent anxiety and depression symptoms: the role of the attachment and social rank systems. *Journal of Adolescence, 28*(3), 325-341.

Jaffari-Bimmel, N., Juffer, F., van IJzendoorn, M. H., Bakermans-Kranenburg, M. J., & Mooijaart, A. (2006). Social development from infancy to adolescence: longitudinal and concurrent factors in an adoption sample. *Developmental Psychology, 42*(6), 1143-1153.

Jaunay, E., Sosoli, A., Greenfield, B., Guile, J. M., Mazet, P., & Cohen, D. (2006). Treatment refusal in adolescents with severe chronic illness and borderline personality disorder. [Review]. *Journal of the Canadian Academy of Child and Adolescent Psychiatry, 15 (3),* 135-142.

Jaunay, E., Sosoli, A., Greenfield, B., Guile, J. M., Mazet, P., & Cohen, D. (2006). Treatment refusal in adolescents with severe chronic illness and borderline personality disorder. *Journal of the Canadian Academy of Child and Adolescent Psychiatry, 15 (3),* 135-142.

Jemerin, J. M. (2004). Latency and the capacity to reflect on mental states. *Psychoanalytic Study of the Child, 59,* 211-239.

Johnson, S. L., Meyer, B., Winett, C., & Small, J. (2000). Social support and self-esteem predict changes in bipolar depression but not mania. *Journal of Affective Disorders, 58*(1), 79-86.

Jones, E. E. (1996). Introduction to the special section on attachment and psychopathology. *Journal of Consulting and Clinical Psychology, 64,* 5-7.

Jonsson, P. V. (2009). Complex trauma, impact on development and possible solutions on an adolescent intensive care unit. *Clinical Child Psychology and Psychiatry, 14 (3),* 437-454.

Jorm, A. F., Morgan, A. J., & Wright, A. (2008). Interventions that are helpful for depression and anxiety in young people: a comparison of clinicians' beliefs with those of youth and their parents. *Journal of Affective Disorders, 111*(2-3), 227-234.

Jurist, E. L. (2005). Mentalized affectivity. *Psychoanalytic Psychology, 22,* 426-444.

Kafetsios, K., Sideridis, G. D., Kafetsios, K., & Sideridis, G. D. (2006). Attachment, social support and well-being in young and older adults. [Research Support, Non-U.S. Gov't]. *Journal of Health Psychology, 11*(6), 863-875.

Kalyani, V., & Uma, H. (2008). Attachment and psychopathology in children with emotional disorders. *Indian Journal of Paediatrics, 75 (4)*, 395-397.

Kandel, D. B., & Davies, M. (1986). Adult sequelae of adolescent depressive symptoms. *Archives of General Psychiatry, 43*(3), 255-262.

Kelly, C., Jorm, A., & Rodgers, B. (2006). Adolescents' responses to peers with depression or conduct disorder. *Australia and New Zealand Journal of Psychiatry, 40*(1), 63-66.

Kelly, C. M., & Jorm, A. F. (2007). Adolescents' intentions to offer assistance to friends with depression or conduct disorder: Associations with psychopathology and psychosocial characteristics. *Early Intervention in Psychiatry, 1*(2), 150-156.

Kenny, D (2011) http://www.davidakenny.net/cm/fit.htm

Keskin, G., & Cam, O. (2009). Adolescence and attachment process: Review of the literature in terms of mental health. [Turkish]. *Yeni Symposium, 47 (2)*, 52-59.

Keskin, G., & Cam, O. (2010). Adolescents' strengths and difficulties: approach to attachment styles. *Journal of Psychiatric & Mental Health Nursing, 17*(5), 433-441.

Klaus, N., Mobilio, A., & King, C. (2009). Parent-adolescent agreement concerning adolescent suicidal thoughts and behaviors.

Klineberg, E., Clark, C., Bhui, K. S., Haines, M. M., Viner, R. M., Head, J., et al. (2006). Social support, ethnicity and mental health in adolescents. *Social Psychiatry & Psychiatric Epidemiology, 41*(9), 755-760.

Knox, J. (2009). The analytic relationship: Integrating Jungian, attachment theory and developmental perspectives. *British Journal of Psychotherapy, 25 (1)*, 5-23.

Kobak, R., & Duemmler, S. (1994). Attachment and conversation: towards a discourse analysis of adolescent and adult security. *Advances in Personal Relationships, 5*, 121-149.

Kobak, R., & Cole, C. . (1994). Attachment and meta-monitoring: Implications for adolescent autonomy and psychopathology. In D. Cicchetti (Ed.), *Rochester symposium on development and psychopathology, Vol. 5: Disorders of the self* (pp. 267-297). Rochester, NY: Rochester University Press.

Kobak, R. R., Sudler, N., & Gamble, W. (1991). Attachment and depressive symptoms during adolescence: A developmental pathways analysis. *Development & Psychopathology, 3*, 461-474.

Kobak, R. R. (1993). *The Adult Attachment Interview Q-Sort.* Unpublished manuscript.

Kobak, R. R., & Sceery, A. (1988). Attachment in late adolescence: working models, affect regulation, and representations of self and others. *Child Development, 59*(1), 135-146.

Koenig, H. G., Westlund, R. E., George, L. K., Hughes, D. C., & et al. (1993). Abbreviating

the Duke Social Support Index for use in chronically ill elderly individuals. *Psychosomatics: Journal of Consultation Liaison Psychiatry, 34*(1), 61-69.

Koren-Karie, N., Oppenheim, D., Dolev, S., Sher, E., & Etzion-Carasso, A. (2002). Mothers' insightfulness regarding their infants' internal experience: relations with maternal sensitivity and infant attachment. *Developmental Psychology, 38*(4), 534-542.

Koren-Karie, N., Oppenheim, D., Dolev, S., & Yirmiya, N. (2009). Mothers of securely attached children with autism spectrum disorder are more sensitive than mothers of insecurely attached children. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 50 (5),* 643-650.

Kring, A. M., & Bachorowski, J.-A. (1999). Emotions and psychopathology. *Cognition and Emotion, 13*, 575-599.

Ladouceur, C. D., Dahl, R. E., Williamson, D. E., Birmaher, B., Ryan, N. D., & Casey, B. J. (2005). Altered emotional processing in paediatric anxiety, depression, and comorbid anxiety-depression. *Journal of Abnormal Child Psychology, 33*(2), 165-177.

Lakey, B., Orehek, E., Hain, K. L., & Van Vleet, M. (2010). Enacted support's links to negative affect and perceived support are more consistent with theory when social influences are isolated from trait influences. *Personality & Social Psychology Bulletin, 36*(1), 132-142.

Lamb, H. R. (1982). Young adult chronic patients: the new drifters. *Hospital & Community Psychiatry, 33*(6), 465-468.

Lambert, A., & de Man, A. (2007). Alexithymia, depression and self-mutilation in adolescent girls. *North American Journal of Psychology, 9*, 555-566.

Landsford, J. E., Criss, M. M., Pettit, G. S., Dodge, K. A., & Bates, J. E. (2003). Friendship quality, peer group affiliation and peer antisocial behaviour as moderators of the link between negative parenting and adolescent externalizing behaviours. *Journal of Research on Adolescence, 13*, 161-184.

Langeland, E., & Wahl, A. K. (2009). The impact of social support on mental health service users' sense of coherence: a longitudinal panel survey. *International Journal of Nursing Studies, 46*(6), 830-837.

Lapsley, D. K., Varshney, N. M., & Aalsma, M. C. (2000). Pathological attachment and attachment style in late adolescence. *Journal of Adolescence, 23*(2), 137-155.

Larose, S., Bernier, A., & Tarabulsy, G. M. (2005). Attachment state of mind, learning dispositions, and academic performance during the college transition. *Developmental Psychology, 41*(1), 281-289.

Larsen, T. K., Friis, S., Haahr, U., Johannessen, J. O., Melle, I., Opjordsmoen, S., et al. (2004). Premorbid adjustment in first-episode non-affective psychosis: distinct patterns of pre-onset course. *British Journal of Psychiatry, 185*, 108-115.

Lazarus, R. S. (1991). Cognition and motivation in emotion. *American Psychologist, 46*(4), 352-367.

Lee, A., & Hankin, B. L. (2009). Insecure attachment, dysfunctional attitudes, and low self-

esteem predicting prospective symptoms of depression and anxiety during adolescence. *Journal of Clinical Child & Adolescent Psychology, 38*(2), 219-231.

Lehnert, K. L., Overholser, J. C., & Spirito, A. (1994). Internalized and externalized anger in adolescent suicide attempters. *Journal of Adolescent Research,, 9*, 105-119.

Lehoux, P. M., Howe, N., Lehoux, P. M., & Howe, N. (2007). Perceived non-shared environment, personality traits, family factors and developmental experiences in bulimia nervosa. [Research Support, Non-U.S. Gov't]. *British Journal of Clinical Psychology, 46*(Pt 1), 47-66.

Lerner R., S., L. (2009). The scientific study of adolescent development: Past, present, and future. In L. S. R. M. Lerner (Ed.), *Handbook of adolescent psychology (3rd ed.)* (pp. 3-14). Hoboken, NJ:: John Wiley & Sons.

Lerner, R. M., & Castellino, D. R. (2002). Contemporary developmental theory and adolescence: developmental systems and applied developmental science. *Journal of Adolescent Health, 31*(6 Suppl), 122-135.

Lerner, R. M. S., L. (2009). *Handbook of adolescent psychology: Individual bases of adolescent development.* NJ: John Wiley & sons.

Leslie, A. (1987). Pretense and Representation: The Origin of 'Theory of Mind. *Psychological Review, 94*(4), 412-426.

Levendosky, A. A., Huth-Bocks, A., & Semel, M. A. (2002). Adolescent peer relationships and mental health functioning in families with domestic violence. *Journal of clinical child and adolescent psychology: the official journal for the Society of Clinical Child and Adolescent Psychology, American Psychological Association, Division 53, 31 (2)*, 206-218.

Levinson, A., & Fonagy, P. (2004). Offending and attachment: The relationship between interpersonal awareness and offending in a prison population with psychiatric disorder. *Canadian Journal of Psychoanalysis, 12*, 225-251.

Levy, K. N., Meehan, K. B., Kelly, K. M., Reynoso, J. S., Weber, M., Clarkin, J. F., et al. (2006). Change in attachment patterns and reflective function in a randomized control trial of transference-focused psychotherapy for borderline personality disorder. *Journal of Consulting & Clinical Psychology, 74*(6), 1027-1040.

Levy, K. N., Meehan, K. B., Weber, M., Reynoso, J., Clarkin, J. F., Levy, K. N., et al. (2005). Attachment and borderline personality disorder: implications for psychotherapy. [Clinical Trial*Psychopathology, 38*(2), 64-74.

Lewis, A. R., Zinbarg, R. E., Mineka, S., Craske, M. G., Epstein, A., & Griffith, J. W. (2010). The relationship between anxiety sensitivity and latent symptoms of emotional problems: A structural equation modeling approach. *Behaviour Research and Therapy, 48*(8), 761-769.

Liddle, H. A., & Schwartz, S. J. (2002). Attachment and family therapy: clinical utility of adolescent-family attachment research. [Review]. *Family process, 41 (3)*, 455-476.

Lindberg, L., & Swanberg, I. (2006). Well-being of 12-year-old children related to interpersonal relations, health habits and mental distress. *Scandinavian Journal of Caring*

Sciences, 20(3), 274-281.

Liotti, G. (2004). Trauma, dissociation, and disorganised attachment: Three strands of a single braid. *Psychotherapy, 41*(4), 472-486.

Liu, Q., Nagata, T., Shono, M., Kitamura, T., Liu, Q., Nagata, T., et al. (2009). The effects of adult attachment and life stress on daily depression: a sample of Japanese university students. *Journal of Clinical Psychology, 65*(7), 639-652.

Luyten, P., Vliegen, N., Van Houdenhove, B., & Blatt, S. J. (2008). Equifinality, multifinality, and the rediscovery of the importance of early experiences: pathways from early adversity to psychiatric and (functional) somatic disorders. *The Psychoanalytic study of the child, 63*, 27-60.

Lyons-Ruth, K., Bronfman, E., & Parsons, E. (1999). Atypical attachment in infancy and early childhood among children at developmental risk. IV. Maternal frightened, frightening, or atypical behavior and disorganised infant attachment patterns. *Monographs of the Society for Research in Child Development, 64*(3), 67-96; discussion 213-220.

MacBeth, A., Gumley, A., Schwannauer, M., & Fisher, R. (2011). Attachment states of mind, mentalization, and their correlates in a first episode psychosis sample. *Psychology and Psychotherapy: Theory, Research and Practice, 84*, 42-57.

Macfie, J., Fitzpatrick, K. L., Rivas, E. M., Cox, M. J., Macfie, J., Fitzpatrick, K. L., et al. (2008). Independent influences upon mother-toddler role reversal: infant-mother attachment disorganisation and role reversal in mother's childhood. [Research Support, N.I.H., Extramural]. *Attachment & Human Development, 10*(1), 29-39.

Madigan, S., Moran, G., Schuengel, C., Pederson, D. R., & Otten, R. (2007). Unresolved maternal attachment representations, disrupted maternal behavior and disorganised attachment in infancy: Links to toddler behavior problems. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 48 (10)*, 1042-1050.

Main, M., Kaplan, N., & Cassidy, J. (1985). Security in infancy, childhood and adulthood: a move to the level of representation. *Monographs of the Society for Research in Child Development, 50* (1-2, serial No. 209), 66-104.

Main, M. (1991). *Metacognitive knowledge, metacognitive monitoring, and singular (coherent) vs miltiple (incoherent) models of attachment.* New York: Routledge.

Main, M. (1996). Introduction to the special section on attachment and psychopathology: 2. Overview of the field of attachment.*Journal of Consulting & Clinical Psychology, 64*(2), 237-243.

Main, M., Goldwyn, R., & Hesse, E. (2002). *Adult Attachment Scoring and Classification Systems (Version 7.1)*. Unpublished manuscript. University of California.

Main, M., & Hesse, E. (1990). Parents unresolved traumatic experiences are related to infant disorganised attachment status: Is frightened and/or frightening behaviour the linking mechanism? In D. C. M. Greenberg, and E.M. Cummings (Ed.), *Attachment in the preschool years: Theory, research and intervention*. Chicago: University of Chicago Press.

Main, M., Kaplan, N., & Cassidy, J. (1985). Security in infancy, childhood and adulthood: A

move to the level of representation. *Monographs of the Society for Research in Child Development, 50*, 66-104.

Main M, S. J. (1990). Procedures for identifying infants as disorganised/disoriented during the Ainsworth Strange Situation. In M. Greenberg, D. Cicchetti & E. Cummings (Eds.), *Attachment in the preschool years: Theory, research and intervention.* (pp. 120-160). Chicago: University of Chicago Press.

Manassis, K., Owens, M., Adam, K. S., West, M., & Sheldon-Keller, A. E. (1999). Assessing attachment: convergent validity of the adult attachment interview and the parental bonding instrument. *Australian & New Zealand Journal of Psychiatry, 33*(4), 559-567.

Massie, H., & Szajnberg, N. (2002). The relationship between mothering in infancy, childhood experience and adult mental health: results of the Brody prospective longitudinal study from birth to age 30. *The International journal of psycho-analysis, 83 (Pt 1)*, 35-55.

Matas, L., Arend, R.A., & Sroufe, L.A. (1978). Continuity and adaptation in the second year: The relationship between quality of attachment and later competance. *Child Development, 49*, 547-556.

Matas, L., Arend, R.A., & Sroufe, L.A. (1978). Continuity of Adaptation in the Second Year: The Relationship Between Quality of Attachment and Later Competence. *Child Development, 49*, 547-556.

Mattsson, M., Topor, A., Cullberg, J., & Forsell, Y. (2008). Association between financial strain, social network and five-year recovery from first episode psychosis. *Social Psychiatry & Psychiatric Epidemiology, 43*(12), 947-952.

Maunder, R. G., & Hunter, J. J. (2009). Assessing patterns of adult attachment in medical patients. *General Hospital Psychiatry, 31 (2)*, 123-130.

Mayer, B., Muris, P., Meesters, C., & Zimmermann-van Beuningen, R. (2009). Brief report: Direct and indirect relations of risk factors with eating behavior problems in late adolescent females. *Journal of Adolescence, 32 (3)*, 741-745.

McLaren, S., & Challis, C. (2009). Resilience among men farmers: the protective roles of social support and sense of belonging in the depression-suicidal ideation relation. *Death Studies, 33*(3), 262-276.

McLewin, L., & Muller, R. (2006). Attachment and social support in the prediction of psychopathology among young adults with and without a history of physical maltreatment. Psychotherapy: Theory, Research, Practice, Training, Vol 46(1), 82-96.

McMahon, C. A., Barnett, B., Kowalenko, N. M., & Tennant, C. C. (2006). Maternal attachment state of mind moderates the impact of postnatal depression on infant attachment. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 47 (7)*, 660-669.

Mead, N., Lester, H., Chew-Graham, C., Gask, L., & Bower, P. (2010). Effects of befriending on depressive symptoms and distress: systematic review and meta-analysis. *British Journal of Psychiatry, 196*(2), 96-101.

Medlow, S., Kelk, N., Cohen, A., & Hickie, I. (2010). Facilitating early intervention: experiences of young people and implications for the shaping of headspace services.

Australasian Psychiatry, *18*(4), 335-339.

Meehan, K. B., Levy, K. N., Reynoso, J. S., Hill, L. L., & Clarkin, J. F. (2009). Measuring reflective function with a multidimensional rating scale: comparison with scoring reflective function on the AAI. *Journal of the American Psychoanalytic Association, 57 (1)*, 208-213.

Meins, E., Fernyhough, C., Fradley, E., & Tuckey, M. (2001). Rethinking maternal sensitivity: mothers' comments on infants' mental processes predict security of attachment at 12 months. *Journal of Child Psychology & Psychiatry & Allied Disciplines, 42*(5), 637-648.

Meins, E., Fernyhough, C., Russel, J., & Clark-Carter, D. (1998). Security of attachment as a predictor of symbolic and mentalising abilities: A longitudinal study. *Social Development, 7*.

Mercer, J. (2001). Attachment therapy using deliberate restraint: an object lesson on the identification of unvalidated treatments. *Journal of child and adolescent psychiatric nursing: official publication of the Association of Child and Adolescent Psychiatric Nurses, Inc, 14 (3)*, 105-114.

Merchant, C., Kramer, A., Joe, S., Venkataraman, S., & King, C. (2009). Predictors of multiple suicide attempts among suicidal black adolescents.

Messer, J. M., & Fremouw, W. J. (2008). A critical review of explanatory models for self-mutilating behaviors in adolescents. *Clinical Psychology Review, 28*(1), 162-178.

Mickelson, K. D., Kessler, R. C., & Shaver, P. R. (1997). Adult attachment in a nationally representative sample. *Journal of Personality and Social Psychology, 73 (5)*, 1092-1106.

Mikulincer, M., & Shaver P. R. (2007). *Attachment bases of psychopathology. Attachment in adulthood: structure, dynamics and change.* New York: Guildford Press.

Mikulincer, M., & Shaver, P.R. (2007). *Attachment in adulthood: structure, dynamics, and change.* New York: The Guildford Press.

Mizen, R. (2009). The embodied mind. *Journal of Analytical Psychology, 54 (2)*, 253-272.

Mohaupt, H., Holgersen, H., Binder, P. E., & Nielsen, G. H. (2006). Affect consciousness or mentalization? A comparison of two concepts with regard to affect development and affect regulation. *Scandinavian Journal of Psychology, 47 (4)*, 237-244.

Moll, S., Holmes, J., Geronimo, J., & Sherman, D. (2009). Work transitions for peer support providers in traditional mental health programs: unique challenges and opportunities. *Work, 33*(4), 449-458.

Moll, S., Holmes, J., Geronimo, J., & Sherman, D. (2009). Work transitions for peer support providers in traditional mental health programs: unique challenges and opportunities. *Work, 33*(4), 449-458.

Moran, G., Fonagy, P., Kurtz, A., Bolton, A., & Brook, C. (1991). A controlled study of psychoanalytic treatment of brittle diabetes. *Journal of the American Academy of Child & Adolescent Psychiatry, 30*(6), 926-935.

Morante, F. (2004). Thinking about voices: A clinical framework for using psychoanalytic psychotherapy to recover a non-psychotic self-representation in a schizophrenic patient.

Psychoanalytic Psychotherapy, 18 (3), 305-323.

Moretti, M. M., & Obsuth, I. (2009). Effectiveness of an attachment-focused manualized intervention for parents of teens at risk for aggressive behaviour: The Connect Program. *Journal of Adolescence, 32 (6)*, 1347-1357.

Moretti, M. M., & Peled, M. (2004). Adolescent-parent attachment: Bonds that support healthy development. *Paediatrics and Child Health, 9 (8)*, 551-555.

Morris, A. S., Silk, J. S., Steinberg, L., Myers, S. S., & Robinson, L. R. (2007). The role of the family context in the development of emotion regulation. *Social Development, 16*(2), 361-388.

Morriss, R. (2006). Psychological models of mood disorder. *Psychiatry Research, 5*(5), 147-150.

Moses, T. (2010). Being treated differently: stigma experiences with family, peers, and school staff among adolescents with mental health disorders.

Moses, T. (2010). Being treated differently: Stigma experiences with family, peers, and school staff among adolescents with mental health disorders. *Social Science & Medicine, 70*(7), 985-993.

Mulder, E., Brand, E., Bullens, R., & Van Marle, H. (2010). A classification of risk factors in serious juvenile offenders and the relation between patterns of risk factors and recidivism. *Criminal Behaviour & Mental Health, 20*(1), 23-38.

Muller, R. T. L. K. E. (2000). Social support, attachment, and psychopathology in high risk formerly maltreated adults. *Child Abuse and Neglect, 24*(7), 883-900.

Mullin, B., & Hinshaw, S. (2007). Emotion regulation and externalizing disorders in children and adolescents. In J.Gross (Ed.), *Handbook of Emotion Regulation*. New York: Guildford Press.

Munoz, L. C., Kerr, M., & Besic, N. (2008). The peer relationships of youths with psychopathic personality traits: A matter of perspective. *Criminal Justice and Behavior, 35*(2), 212-227.

Muris, P., Maas, A., Muris, P., & Maas, A. (2004). Strengths and difficulties as correlates of attachment style in institutionalized and non-institutionalized children with below-average intellectual abilities. *Child Psychiatry & Human Development, 34*(4), 317-328.

Muris, P., Meesters, C., van Melick, M., & Zwambag, L. (2001). Self reported attachment style, attachment quality, and symptoms of anxiety and depression in young adolescents. *Personality and Individual Differences, 30*, 809-818.

Myhr, G., Sookman, D., & Pinard, G. (2004). Attachment security and parental bonding in adults with obsessive-compulsive disorder: A comparison with depressed out-patients and healthy controls. *Acta Psychiatrica Scandinavica, 109 (6)*, 447-456.

Najmi, S., Wegner, D. M., & Nock, M. K. (2007). Thought suppression and self-injurious thoughts and behaviors. *Behaviour Research & Therapy, 45*(8), 1957-1965.

Nakash-Eisikovits, O., Dutra, L., & Westen, D. (2002). Relationship between attachment patterns and personality pathology in adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 41 (9)*, 1111-1123.

Needham, B. (2008). Reciprocal relationships between symptoms of depression and parental support during the transition from adolescence to young adulthood *Journal of Youth and Adolescence, 37*(8), 893-905.

Neeleman, J., Power, M. . (1994). Social support and depression in three groups of psychiatric patients and a group of medical controls. *Social Psychiatry and Psychiatric Epidemiology, 29*, 46-51.

Neighbors, B., Forehand, R., & Bau, J. (1997). Interparental conflict and relations with parents as predictors of young adult functioning.

Newcomb, M. D., & Bentler, P. M. (1988). Impact of adolescent drug use and social support on problems of young adults: A longitudinal study. *Journal of Abnormal Psychology, 97*(1), 64-75.

Nishikawa, S., Hagglof, B., & Sundbom, E. (2010). Contributions of attachment and self-concept on internalizing and externalizing problems among Japanese adolescents. *Journal of Child and Family Studies, 19*(3), 334-342.

Nixon, M. K., Cloutier, P. F., & Aggarwal, S. (2002). Affect regulation and addictive aspects of repetitive self-injury in hospitalized adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry, 41*(11), 1333-1341.

Nock, M. K., & Prinstein, M. J. (2005). Contextual features and behavioral functions of self-mutilation among adolescents. *Journal of Abnormal Psychology, 114*(1), 140-146.

Norris, F. H., & Murrell, S. A. (1984). Protective function of resources related to life events, global stress, and depression in older adults. *Journal of Health & Social Behavior, 25*(4), 424-437.

O'Connor, T. G., & Spagnola, M. E. (2009). Early stress exposure: Concepts, findings, and implications, with particular emphasis on attachment disturbances. *Child and Adolescent Psychiatry and Mental Health, 3*.

Offer, D., Howard, K. I., Schonert, K. A., & Ostrov, E. (1991). To whom do adolescents turn for help? Differences between disturbed and nondisturbed adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry, 30*(4), 623-630.

Ogawa, J. R., Sroufe, L. A., Weinfield, N. S., Carlson, E. A., & Egeland, B. (1997). Development and the fragmented self: longitudinal study of dissociative symptomatology in a nonclinical sample. *Development and Psychopathology, 9 (4)*, 855-879.

O'Kearney, R. (1996). Attachment disruption in anorexia nervosa and bulimia nervosa: a review of theory and empirical research.*International Journal of Eating Disorders, 20*(2), 115-127.

Ong, A., Bergeman, C., & Boker, S. (2009). Resilience comes of age: Defining features in later adulthood.

Onwumere, J., Kuipers, E., Bebbington, P., Dunn, G., Freeman, D., Fowler, D., et al. (2009). Patient perceptions of caregiver criticism in psychosis: links with patient and caregiver functioning. *Journal of Nervous & Mental Disease, 197*(2), 85-91.

Oppenheim, D., & Koren-Karie, N. (2002). Mother's insightfulness regarding their children's internal worlds: The capacity underlying secure child-mother relationships. *Infant Mental Health Journal, 23*, 593-605.

Orbach, I., Blomenson, R., Mikulincer, M., Gilboa-Schechtman, E., Rogolsky, M., & Retzoni, G. (2007). Perceiving a problem-solving task as a threat and suicidal behaviour in adolescents. *Journal of Social and Clinical Psychology, 26*(9), 1010-1034.

Ostler, T., Bahar, O. S., & Jessee, A. (2010). Mentalization in children exposed to parental methamphetamine abuse: relations to children's mental health and behavioral outcomes. *Attachment & Human Development, 12 (3)*, 193-207.

Oyserman, D., Bybee, D., & Mowbray, C. (2002). Influences of maternal mental illness on psychological outcomes for adolescent children. *Journal of Adolescence 25(6), 587-602.*

Parker, G., Tupling, H., & Brown, L.B. (1979). A Parental Bonding Instrument. *British Journal of Medical Psychology, 51*, 1-10.

Parker, G., Roussos, J., Hadzi-Pavlovic, D., Mitchell, P., Wilhelm, K., & Austin, M. P. (1997). The development of a refined measure of dysfunctional parenting and assessment of its relevance in patients with affective disorders. *Psychological Medicine, 27*(5), 1193-1203.

Parker, J. G., & Asher, S. R. (1986). Peer relations and later personal adjutments: are low accepted children at risk? *Psychological Bulletin, 102*, 357-389.

Parry, G. (1988). Mobilizing social support. In F. N. Watts (Ed.), *New Developments in Clinical Psychology*. (Vol. 2, pp. 83-104). Chichester: Wiley.

Paz Pruitt, I. T. (2007). Family treatment approaches for depression in adolescent males. *American Journal of Family Therapy, 35 (1)*, 69-81.

Pearlin, A. I. (1985). social structure and process of social support. In S. Cohen & L.Syme (Eds.), *Social Support and Health* (pp. 43-59). London: Academic Press.

Pelcovitz, D., van der Kolk, B., Roth, S., Mandel, F., Kaplan, S., & Resick, P. (1997). Development of a criteria set and a structured interview for disorders of extreme stress (SIDES). *Journal of Traumatic Stress, 10*(1), 3-16.

Pencer, A., & Addington, J. (2008). Models of Substance Use in Adolescents With and Without Psychosis. *Journal of Canadian Academy of Child and Adolescent Psychiatry, 17*(4), 202-209.

Pernice-Duca, F. (2008). The structure and quality of social network support among mental health consumers of clubhouse programs. *Journal of Community Psychology, 36*(7), 929-946.

Phillips, K., & Power, M. (2007). A new self-report measure of emotion regulation in adolescents: The regulation of emotions questionnaire. *Clinical Psychology and Psychotherapy, 14*, 145-156.

Pierce, G. R., Sarason, B. R., & Sarason, I. G. (1996). *Handbook of social support and the family.* New York: Plenum.

Pierrehumbert, B., Torrisi, R., Glatz, N., Dimitrova, N., Heinrichs, M., & Halfon, O. (2009). The influence of attachment on perceived stress and cortisol response to acute stress in women sexually abused in childhood or adolescence. *Psychoneuroendocrinology, 34 (6),* 924-938.

Piko, B., & Luszczynska, A. (2010). Social inequalities in adolescent depression: social support and optimism as mediators?. *Psychiatria Hungarica, 25*(3), 233-242.

Piko, B. F., Kovacs, E., & Fitzpatrick, K. M. (2009). What makes a difference? Understanding the role of protective factors in Hungarian adolescents' depressive symptomatology. *European Child & Adolescent Psychiatry, 18*(10), 617-624.

Pinkerton, J., & Dolan, P. (2007). Family support, social capital, resilience and adolescent coping. *Child & Family Social Work, 12*(3), 219-228.

Pinkerton, J., & Dolan, P. (2007). Family support, social capital, resilience and adolescent coping. *Child & Family Social Work, 12*(3), 219-228.

Platts, H., Mason, O., Tyson, M., Platts, H., Mason, O., & Tyson, M. (2005). Early maladaptive schemas and adult attachment in a UK clinical population. *Psychology & Psychotherapy: Theory, Research & Practice, 78*(Pt 4), 549-564.

Pollak, S. D., & Kistler, D. J. (2002). Early experience is associated with the development of categorical representations for facial expressions of emotion. *Proceedings of the National Academy of Sciences of the United States of America, 99*(13), 9072-9076.

Power, M. J., Champion, L. A., & Aris, S. J. (1988). The development of a measure of social support: the Significant Others (SOS) Scale. *British Journal of Clinical Psychology, 27*(Pt 4), 349-358.

Pridgen, B. (2010). Navigating the internet safely: Recommendations for residential programs targeting at-risk adolescents. *Harvard Review of Psychiatry, 18 (2),* 131-138.

Priel, B., & Shamai, D. (1995). Attachment style and perceived social support: Effects on affect regulation. *Personality and Individual Differences, 19*(2), 235-241.

Radojevic, M. (1994). Mental representations of attachment among prospective Australian fathers. *Australian & New Zealand Journal of Psychiatry, 28*(3), 505-511.

Rastam, M., Gillberg, C., & Wentz, E. (2003). Outcome of teenage-onset anorexia nervosa in a Swedish community-based sample. *European Child & Adolescent Psychiatry, 12 Suppl 1,* I78-90.

Ravens-Sieberer, U., Erhart, M., Wille, N., Wetzel, R., Nickel, J., & Bullinger, M. (2006). Generic health-related quality-of-life assessment in children and adolescents: methodological considerations. *Pharmacoeconomics, 24*(12), 1199-1220.

Ravitz, P., Maunder, R., Hunter, J., Sthankiya, B., & Lancee, W. (2010). Adult attachment measures: a 25-year review. *Journal of Psychosomatic Research, 69*(4), 419-432.

Reicher, H. (1993). Family and peer relations and social-emotional problems in adolescence. *Studia Psychologica, 35*(4-5), 403-408.

Reimer, M. S., Overton, W. F., Steidl, J. H., Rosenstein, D. S., & Horowitz, H. (1996). Familial responsiveness and behavioral control: Influences on adolescent psychopathology, attachment, and cognition. *Journal of Research on Adolescence, 6*(1), 87-112.

Rigby, K. (2000). Effects of peer victimization in schools and perceived social support on adolescent well-being. *Journal of Adolescence, 23,* 57-68

Robins, L. N., & Rutter, M. (1990). *Straight and Deviant Pathways from Childhood to Adulthood.* Cambridge: Cambridge University Press.

Robinson, J., Bruxner, A., Harrigan, S., Bendall, S., Killackey, E., Tonin, V., et al. (2010). Study protocol: The development of a pilot study employing a randomised controlled design to investigate the feasibility and effects of a peer support program following discharge from a specialist first-episode psychosis treatment centre. *BMC Psychiatry 10:37,* 1-7

Roche, D. N., Runtz, M.G., Hunter, M.A. (1999). Adult attachment: A mediator between child sexual abuse and later psychological adjustment. *Journal of Interpersonal Violence, 14*(2), 184-207.

Rockhill, C., Vander Stoep, A., McCauley, E., & Katon, W. (2009). Social competence and social support as mediators between comorbid depressive and conduct problems and functional outcomes in middle school children. *Journal of Adolescence,*32 (3) , 535-553

Roff, J. D. (1990). Childhood peer rejection as a predictor of young adults' mental health. *Psychological Reports, 67*(3, Pt 2), 1263-1266.

Roisman, G. I., Holland, A., Fortuna, K., Fraley, R. C., Clausell, E., & Clarke, A. (2007). The Adult Attachment Interview and self-reports of attachment style: an empirical rapprochement. *Journal of Personality & Social Psychology, 92*(4), 678-697.

Roisman, G. I. F. R. C. B. J. (2007). A taxometric study of the Adult Attachment Interview. *Developmental Psychology, 43*(3), 675-686.

Rosenberg, H. J., Jankowski, M., Fortuna, L. R., Rosenberg, S. D., & Mueser, K. T. (2011). A pilot study of a cognitive restructuring program for treating posttraumatic disorders in adolescents. *Psychological Trauma: Theory, Research, Practice, and Policy, 3*(1), 94-99.

Rosenstein, D. S., & Horowitz, H. A. (1996). Adolescent attachment and psychopathology. *Journal of Consulting and Clinical Psychology, 64 (2),* 244-253.

Rossow, I., & Wichstrom, L. (2010). Receipt of help after deliberate self-harm among adolescents: Changes over an eight-year period. *Psychiatric Services, 61 (8),* 783-787.

Rothschild-Yakar, L., Levy-Shiff, R., Fridman-Balaban, R., Gur, E., & Stein, D. (2010). Mentalization and relationships with parents as predictors of eating disordered behavior. *Journal of Nervous and Mental Disease, 198 (7),* 501-507.

Roustit, C., Campoy, E., Chaix, B., & Chauvin, P. (2010). Exploring mediating factors in the association between parental psychological distress and psychosocial maladjustment in adolescence. *European Child & Adolescent Psychiatry, 19*(7), 597-604.

Runkewitz, K., Kirchmann, H., & Strauss, B. (2006). Anxiety and depression in primary care patients: Predictors of symptom severity and developmental correlates. *Journal of Psychosomatic Research, 60 (5),* 445-453.

Runtz, M. G., & Schallow, J. R. (1997). Social support and coping strategies as mediators of adult adjustment following childhood maltreatment. *Child Abuse & Neglect, 21*(2), 211-226.

Rutter, M. (2000). Psychosocial influences: critiques, findings, and research needs. *Development & Psychopathology, 12*(3), 375-405.

Rutter, M., Kreppner, J., & Sonuga-Barke, E. (2009). Emanuel miller lecture: Attachment insecurity, disinhibited attachment, and attachment disorders: where do research findings leave the concepts? *Journal of Child Psychology and Psychiatry and Allied Disciplines, 50 (5),* 529-543.

Safier, E. J. (2003). Seven ways that the concepts of attachment, mentalization and theory of mind transform family treatment. *Bulletin of the Menninger Clinic, 67 (3),* 260-270.

Sagi, A., van IJzendoorn, M. H., Scharf, M., Joels, T., Koren-Karie, N., Mayseless, O., et al. (1997). Ecological Constraints for Intergenerational Transmission of Attachment. *International Journal of Behavioural Development, 20*(2), 287-299.

Sameroff, A. J. (2000). Developmental systems and psychopathology. *Development & Psychopathology, 12*(3), 297-312.

Sarason, B. R., Pierce, G. R., & Sarason, I. G. (1990). Social support: The sense of acceptance and the role of relationships. In B. R. Sarason, I. G. Sarason & G. R. Pierce (Eds.), *Social Support: An Interactional View* (pp. 97-128). New York: John Wiley & Sons Inc.

Sarason, B. R., Pierce, G. R., Shearin, E. N., Sarason, I. G., & Waltz, J. A. (1991). Perceived social support and working models of self and actual others. *Journal of Personality and Social Psychology, 60*(2), 273-287.

Schaefer, C., Coyne, J. C., & Lazarus, R. S. (1981). The health-related functions of social support. *Journal of Behavioral Medicine, 4*(4), 381-406.

Scharf, M. (2001). A "natural experiment" in child rearing ecologies and adolescents' attachment and separation representations. *Child Development, 72*(1), 236-251.

Scharf, M., Mayseless, O., & Kivenson-Baron, I. (2004). Adolescents' attachment representations and developmental tasks in emerging adulthood. *Developmental Psychology, 40*(3), 430-444.

Schechter, D. S. (2003). Intergenerational communication of maternal violent trauma: Understanding the interplay of reflective functioning and post traumatic psychopathology. In S. W. Coates & D. S. Schechter (Eds.), *Trauma and Human Bonds* (pp. 115-142). Hillsdale NJ: The Analytic Press.

Scheid, T. L., & Brown, T. N. (2010). *A handbook for the study of mental health: Social contexts, theories, and systems (2nd ed)*. New York, NY: Cambridge University Press; US.

Schindler, A., Thomasius, R., Sack, P.-M., Gemeinhardt, B., Kustner, U., & Eckert, J.

(2005). Attachment and substance use disorders: A review of the literature and a study in drug dependent adolescents. *Attachment & Human Development, 7*(3), 207-228.

Schofield, G. a. B., M. . (2006). *Attachment Handbook for Foster Care and Adoption* London: BAAF.

Schulz, M. S., Waldinger, R. J., Hauser, S. T., & Allen, J. P. (2005). Adolescents' behavior in the presence of interparental hostility: developmental and emotion regulatory influences. *Development & Psychopathology, 17*(2), 489-507.

Schuppert, H., Giesen-Bloo, J., van Gemert, T. G., Wiersema, H. M., Minderaa, R. B., Emmelkamp, P. M., et al. (2009). Effectiveness of an emotion regulation group training for adolescents--A randomized controlled pilot study. *Clinical Psychology & Psychotherapy, 16*(6), 467-478.

Scott Brown, L., & Wright, J. (2001). Attachment theory in adolescence and its relevance to developmental psychopathology. *Clinical Psychology & Psychotherapy, 8*, 15-32.

Scott, S. (2003). Integrating attachment theory with other approaches to developmental psychopathology. *Attachment & Human Development, 5*(3), 307-312.

Sharp, C., Williams, L. L., Ha, C., Baumgardner, J., Michonski, J., Seals, R., et al. (2009). The development of a mentalization-based outcomes and research protocol for an adolescent inpatient unit. *Bulletin of the Menninger Clinic, 73 (4)*, 311-338.

Shaver, P., & Mikulincer, M. (2007). Adult attachment strategies and the regulation of emotion. In J.Gross (Ed.), *Handbook of Emotion Regulation*. New York: Guildford Press.

Shaw, D. S., & Bell, R. Q. (1993). Developmental theories of parental contributors to antisocial behavior. *Journal of Abnormal Child Psychology, 21*(5), 493-518.

Sheeber, L., Hops, H., Alpert, A., Davis, B., & Andrews, J. (1997). Family support and conflict: prospective relations to adolescent depression. *Journal of Abnormal Child Psychology, 25*(4), 333-344.

Shmueli-Goetz, Y., Target, M., Fonagy, P., & Datta, A. (2008). The Child Attachment Interview: a psychometric study of reliability and discriminant validity. *Developmental Psychology, 44*(4), 939-956.

Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: new procedures and recommendations. *Psychological Methods, 7*(4), 422-445.

Sim, L., Adrian, M., Zeman, J., Cassano, M., & Friedrich, W. (2009). Adolescent deliberate self harm: Linkages to emotion regulation and family emotional climate. *Journal of Research on Adolescence, 19*(1), 75-91.

Skarderud, F. (2007). Eating one's words, Part I: 'Concretised metaphors' and reflective function in anorexia nervosa - An interview study. *European Eating Disorders Review, 15 (3)*, 163-174.

Skolnick, A. (1986). Early attachment and personal relationships across the life course. In P. B. Baltes, D. L. Featherman & R. M. Lerner (Eds.), *Life-span Devlopment and Behaviour* (Vol. 7, pp. 174-206). Hillsdale:NJ: Lawrence Erlbaum.

Slade, A. (2005). Parental reflective functioning: an introduction. *Attachment & Human Development, 7*(3), 269-281.

Slade, A., Aber, J., Bresgi, I., Berger, B., & Kaplan, M. (2004). *The Parent development Interview - Revised*. Unpublished Protocol. The City University of New York.

Slade, A., Grienenberger, J., Bernbach, E., Levy, D., & Locker, A. (2005). Maternal reflective functioning, attachment, and the transmission gap: a preliminary study. *Attachment & Human Development, 7*(3), 283-298.

Slade, A., Sadler, L., De Dios-Kenn, C., Webb, D., Currier-Ezepchick, J., & Mayes, L. (2005). Minding the baby: A reflective parenting program. *Psychoanalytic Study of the Child, 60*, 74-100.

Sloman, L., Atkinson, L., Milligan, K., & Liotti, G. (2002). Attachment, social rank, and affect regulation: speculations on an ethological approach to family interaction. [Review]. *Family process, 41 (3)*, 313-327.

Smith, D., & Anderson, R. (2000). Social support, risk-level and safety actions following acute assessment of suicidal youth. *Journal of Youth and Adolescence, 29*(4), 451-465.

Sommer, G., & Frydrich, T. (1991). Development and validation of a questionnaire on social support. *Diagnostica, 37*(2), 160-178.

Sontag, L. M., & Graber, J. A. (2010). Coping with perceived peer stress: Gender-specific and common pathways to symptoms of psychopathology. *Developmental Psychology, 46*(6), 1605-1620.

Southam-Gerow, M. A., & Kendall, P. C. (2002). Emotion regulation and understanding: implications for child psychopathology and therapy. *Clinical Psychology Review, 22*(2), 189-222.

Spangler, G., & Zimmermann, P. (1999). Attachment representation and emotion regulation in adolescents: a psychobiological perspective on internal working models. *Attachment & Human Development, 1*(3), 270-290.

Spirito, A., Brown, L., Overholser, J. & Fritz, G. (1989). Attempted suicide in adolescence: Review and critique of the literature. *Clinical Psychology Review, 9*, 335-363.

Spirito, A., Overholser, J., & Stark, L. J. (1989). Common problems and coping strategies. II: Findings with adolescent suicide attempters. *Journal of Abnormal Child Psychology, 17*(2), 213-221.

Sroufe, L. A., & Waters, E. (1977). Attachment as an organisational construct. *Child Development, 48*, 1184-1199.

Sroufe, L. A. (1983). Infant-caregiver attachment and patterns of adaptation in pre-school: The roots of maladaptation and competence. In M. Perlmutter (Ed.), *Minnesota Symposium in Child Psychology* (Vol. 16, pp. 44-81). Hillsdale: NJ: Erlbaum.

Sroufe, L. A., Duggal, S., Weinfield, N. S., & Carlson, E. (2000). Relationships, development, and psychopathology. In M. L. A. Sameroff (Ed.), *Handbook of developmental psychopathology (2nd ed.)* (pp. 75-92). New York: Kluwer Academic/Plenum Press.

Sroufe, L. A., Egeland, B., Carlson, E. & Collins, W.A. (2005). *The development of the person: The Minnesota study of risk and adaptation from birth to adulthood.* New York: Guildford.

Sroufe, L. A., Carlson, E. A., Levy, A. K., & Egeland, B. (1999). Implications of attachment theory for developmental psychopathology. *Development & Psychopathology, 11*(1), 1-13.

Sroufe, L. A., & Coffino, B. (2010). Conceptualizing the role of early experience: Lessons from the Minnesota Longitudinal Study. *Carlson, E. Developmental Review, 30*(1), 36-51.

Sroufe, L. A., Fox, N., & Pancake, V. (1983). Attachment and dependency in developmental perspective. . *Child Development, 54*, 1615-1627.

Stadler, C., Feifel, J., Rohrmann, S., Vermeiren, R., & Poustka, F. (2010). Peer-victimization and mental health problems in adolescents: are parental and school support protective? *Child Psychiatry & Human Development, 41*(4), 371-386.

Steele, H., & Steele, M. *Clinical Applications of the Adult Attachment Interview*. New York: The Guildford Press.

Steele, H., Steele, M., & Fonagy, P. (1996). Associations among attachment classifications of mothers, fathers, and their infants. *Child Development, 67*(2), 541-555.

Steele, K. (2009). Reflections on integrations, mentalization, and institutional realization. *Journal of Trauma and Dissociation, 10 (1)*, 1-8.

Steer, R. A., Kumar, G., Ranieri, W., & Beck, A. T.(1998). Use of the Beck Depression Inventory-II with adolescent psychiatric outpatients. *Journal of Psychopathology and Behavioral Assessment, 20*(2), 127-137.

Steinberg, L. & Sheffield Morris, A. (2001) Adolescent development *Annual Review of Psychology 52*, 83-110

Steiner, H., Kwan, W., Shaffer, T. G., Walker, S., Miller, S., Sagar, A., et al. (2003). Risk and protective factors for juvenile eating disorders. [Review]. *European Child & Adolescent Psychiatry, 12 Suppl 1*, I38-36.

Steinhausen, H. (2006). Developmental psychopathology in adolescence: Findings from a Swiss study - The NAPE Lecture 2005.

Steinhausen, H. C., & Metzke, C. W. (2004). The impact of suicidal ideation in preadolescence, adolescence, and young adulthood on psychosocial functioning and psychopathology in young adulthood. *Acta Psychiatrica Scandinavica, 110*(6), 438-445.

Steinhausen, H.-C., & Metzke, C. W. (2001). Risk, compensatory, vulnerability, and protective factors influencing mental health in adolescence. *Journal of Youth and Adolescence, 30*(3), 259-280.

Stice, E., Ragan, J., & Randall, P. (2004). Prospective relations between social support and depression: differential direction of effects for parent and peer support? *Journal of Abnormal Psychology, 113*(1), 155-159.

Suldo, S. M., & Huebner, E. (2006). Is extremely high life satisfaction during adolescence

advantageous? *Social Indicators Research, 78*(2), 179-203.

Suldo, S. M., & Shaffer, E. J. (2008). Looking beyond psychopathology: The dual-factor model of mental health in youth. *School Psychology Review, 37*(1), 52-68.

Sullivan, H., S,. (1953). *The Interpersonal Theory of Psychiatry*. New York: W.W. Norton and Company.

Surcinelli, P., Rossi, N., Montebarocci, O., Baldaro, B., Surcinelli, P., Rossi, N., et al. (2010). Adult attachment styles and psychological disease: examining the mediating role of personality traits. *Journal of Psychology, 144*(6), 523-534.

Suyemoto, K. L., & MacDonald, M. L. (1995). Self-cutting in female adolescents. *Psychotherapy, 32*(1), 162-171.

Taylor, E. L., Target, M., & Charman, T. (2008). Attachment in adults with high-functioning autism. *Attachment and Human Development, 10 (2)*, 143-163.

Taylor, G. J. (2000). Recent developments in alexithymia theory and research. *Canadian Journal of Psychiatry - Revue Canadienne de Psychiatrie, 45*, 134-142.

Thompson, R. A. (1994). Emotion regulation: a theme in search of definition. *Monographs of the Society for Research in Child Development, 59*(2-3), 25-52.

Thompson, R. A. (2001). Childhood anxiety disorders from the perspective of emotion regulation and attachment. In M. W. Vasey & M. R. Dadds (Eds.), *The developmental psychopathology of anxiety.* (pp. 160-182). New York: Oxford University.

Thompson, R. A., & Lamb, M. E. (1986). Infant mother attachment: new directions for theory and research. In P. B. Baltes, D. L. Featherman & R. M. Lerner (Eds.), *Life-span Development and Behaviour* (Vol. 7, pp. 1-42). Hillsdale, NJ: Lawrence Erlbaum.

Thorup, A., Petersen, L., Jeppesen, P., Ohlenschlaeger, J., Christensen, T., Krarup, G., et al. (2006). Social network among young adults with first-episode schizophrenia spectrum disorders: Results from the Danish OPUS trial.

Thorup, A., Petersen, L., Jeppesen, P., Ohlenschlaeger, J., Christensen, T., Krarup, G., et al. (2007). Gender differences in young adults with first-episode schizophrenia spectrum disorders at baseline in the Danish OPUS study.

Timmermans, M., van Lier, P., & Koot, H. (2010). The role of stressful events in the development of behavioural and emotional problems from early childhood to late adolescence. *Psychological Medicine: A Journal of Research in Psychiatry and the Allied Sciences, 40*(10), 1659-1668.

Tolmunen, T., Honkalampi, K., Hintikka, J., Rissanen, M.-L., Maaranen, P., Kylma, J., et al. (2010). Adolescent dissociation and alexithymia are distinctive but overlapping phenomena. *Psychiatry Research, 176*(1), 40-44.

Tomlin, A. M., Sturm, L., & Koch, S. M. (2009). Observe, listen, wonder, and respond: A preliminary exploration of reflective function Skills in early care providers. *Infant Mental Health Journal, 30 (6)*, 634-647.

Tracy, R. L., & Ainsworth, M. (1981). Maternal affectionate behavior and infant-mother attachment patterns. *Child Development, 52,* 1341-1343.

Turner, H., Bryant-Waugh, R., Peveler, R., Turner, H., Bryant-Waugh, R., & Peveler, R. (2010). A new approach to clustering eating disorder patients: assessing external validity and comparisons with DSM-IV diagnoses. Validation Studies]. *Eating Behaviors, 11*(2), 99-106.

Turton, P., McGauley, G., Marin-Avellan, L., & Hughes, P. (2001). The adult attachment interview: rating and classification problems posed by non-normative samples. *Attachment & Human Development, 3*(3), 284-303.

Tyrell, C., & Dozier, M. . (1997). The role of attachment in therapeutic process and outcome for adults with serious psychiatric disorders. Cited in Dozier, M., and Tyrell, C. (1998). The role of attachment in therapeutic relationships. In J. A. Simpson & W. S. Rholes. (Eds.), *Attachment theory and close relationships*. New York: Guildford Press.

van der Kolk, B. A., Roth, S., Pelcovitz, D., Sunday, S., & Spinazzola, J. . (2005). Disorders of extreme stress: The empirical foundation of a complex adaptation to trauma. *Journal of Traumatic Stress, 18*, 389-399.

Van Dorn, R. A., Kosterman, R., Williams, J. H., Chandler, K., Young, M., Catalano, R. F., et al. (2010). The relationship between outpatient mental health treatment and subsequent mental health symptoms and disorders in young adults. *Administration and Policy in Mental Health, 37*(6), 484-496.

van Gestel-Timmermans, J. A., Brouwers, E. P., & van Nieuwenhuizen, C. (2010). Recovery Is Up to You, a peer-run course. *Psychiatric Services, 61*(9), 944-945.

van IJzendoorn, M. (1995). Adult attachment representations, parental responsiveness, and infant attachment: a meta-analysis on the predictive validity of the Adult Attachment Interview. *Psychological Bulletin, 117*(3), 387-403.

van IJzendoorn, M., & Bakermans-Kranenburg, M. J. (1996). Attachment representations in mothers, fathers, adolescents, and clinical groups: a meta-analytic search for normative data. *Journal of Consulting & Clinical Psychology, 64*(1), 8-21.

van IJzendoorn, M., Vereijken, C. M., Bakermans-Kranenburg, M. J., & Riksen-Walraven, J. M. (2004). Assessing attachment security with the Attachment Q Sort: meta-analytic evidence for the validity of the observer AQS. *Child Development, 75*(4), 1188-1213.

van IJzendoorn, M. H., Bakermans-Kranenburg, M.J. (2008). The distribution of adult attachment representations in clinical groups: A meta-analytic search for patterns of attachment in 105 AAI studies. In H. Steele & M. Steele (Eds.), *Clinical applications of the Adult Attachment Interview.* (pp. 69-96). New York: Guildford Press.

van IJzendoorn, M. H., & Bakermans-Kranenburg, M. J. (2003). Attachment disorders and disorganised attachment: similar and different. *Attachment & Human Development, 5*(3), 313-320.

van IJzendoorn, M. H., Schuengel, C., & Bakermans-Kranenburg, M. J. (1999). Disorganised attachment in early childhood: Meta-analysis of precursors, concomitants, and sequelae. *Development and Psychopathology, 11 (2)*, 225-249.

van Rijn, S., Aleman, A., de Sonneville, L., Sprong, M., Ziermans, T., Schothorst, P., et al. (2011). Misattribution of facial expressions of emotion in adolescents at increased risk of psychosis: The role of inhibitory control. *Psychological Medicine: A Journal of Research in Psychiatry and the Allied Sciences, 41*(3), 499-508.

van Rijn, S., Schothorst, P., van 't Wout, M., Sprong, M., Ziermans, T., van Engeland, H., et al. (2011). Affective dysfunctions in adolescents at risk for psychosis: Emotion awareness and social functioning. *Psychiatry Research, 187*(1-2), 100-105.

Vanheule, S., Desmet, M., Meganck, R., Bogaerts, S., Vanheule, S., Desmet, M., et al. (2007). Alexithymia and interpersonal problems. *Journal of Clinical Psychology, 63*(1), 109-117.

Varian, H. (2005). Bootstrap Tutorial. *Mathematica Journal, 9*, 768-775.

Vasilev, C. A., Crowell, S. E., Beauchaine, T. P., Mead, H. K., & Gatzke-Kopp, L. M. (2009). Correspondence between physiological and self-report measures of emotion dysregulation: A longitudinal investigation of youth with and without psychopathology. *Journal of Child Psychology and Psychiatry, 50*(11), 1357-1364.

Veselska, Z., Madarasova Geckova, A., Gajdosova, B., Orosova, O., van Dijk, J. P., & Reijneveld, S. A. (2010). Socio-economic differences in self-esteem of adolescents influenced by personality, mental health and social support. *European Journal of Public Health, 20*(6), 647-652.

Von Bertalanffy, L. (1968). *General System theory: Foundations, Development, Applications*. New York: George Braziller.

Wallace, J. L., & Vaux, A. (1993). Social support network orientation: The role of adult attachment style. *Journal of Social and Clinical Psychology 12*, 354-365.

Waller, E., Scheidt, C. E., Hartmann, A., Waller, E., Scheidt, C. E., & Hartmann, A. (2004). Attachment representation and illness behavior in somatoform disorders. [Research Support, Non-U.S. Gov't]. *Journal of Nervous & Mental Disease, 192*(3), 200-209.

Wallis, P., & Steele, H. (2001). Attachment representations in adolescence: further evidence from psychiatric residential settings. *Attachment & Human Development, 3*(3), 259-268.

Walsh, S., Harel-Fisch, Y., & Fogel-Grinvald, H. (2010). Parents, teachers and peer relations as predictors of risk behaviors and mental well-being among immigrant and Israeli born adolescents.

Ward, A., Ramsay, R., Turnbull, S., Steele, M., Steele, H., & Treasure, J. (2001). Attachment in anorexia nervosa: a transgenerational perspective. *British Journal of Medical Psychology, 74*(Pt 4), 497-505.

Ward, M. J., & Carlson, E. A. (1995). The predictive validuty of the Adult Attachment Interview for adolescent mothers. *Child Development, 66*, 69-79.

Waters, E., Wippman, J., & Sroufe, L. A. (1979). Attachment, positive affect, and competence in the peer group: two studies in construct validation. *Child Development, 50*(3), 821-829.

Weber, S., Puskar, K. R., & Ren, D. (2010). Relationships between depressive symptoms and perceived social support, self-esteem, & optimism in a sample of rural adolescents. *Issues in Mental Health Nursing, 31*(9), 584-588.

Webster, L., & Hackett, R. K. (2007). A comparison of unresolved versus resolved status and its relationship to behaviour in maltreated adolescents. *School Psychology International, 28*(3), 365-378.

Weems, C. F., & Pina, A. A. (2010). The assessment of emotion regulation: Improving construct validity in research on psychopathology in youth--An introduction to the special section. *Journal of Psychopathology and Behavioral Assessment, 32*(1), 1-7.

Weinberg, A., & Klonsky, E. D. (2009). Measurement of emotion dysregulation in adolescents. *Psychological Assessment, 21*(4), 616-621.

Weismoore, J. T., & Esposito-Smythers, C. (2010). The role of cognitive distortion in the relationship between abuse, assault, and non-suicidal self-injury. *Journal of Youth & Adolescence, 39*(3), 281-290.

Weiss, D. S., & Marmar, C. R. (1997). The Impact of Event Scale - Revised. In J. P. W. a. T. M. Keane (Ed.), *Assessing Psychological Trauma and PTSD* (pp. 399-411). New York: Guildford Press.

Wells, K., Wyatt, E., & Hobfoll, S. (1991). Factors associated with adaptation of youths discharged from residential treatment. *Children and Youth Services Review, 13*(3), 199-216.

West, M., & Sheldon-Keller, A. (1992). The assessment of dimensions relevant to adult reciprocal attachment. *The Canadian Journal of Psychiatry, 37*, 600-660.

West, M., Rose, S., Spreng, S., Sheldon-Keller, A. & Adam, K. (1998). Adolescent attachment questionnaire: A brief assessment of attachment in adolescence. *Journal of Youth and Adolescence, 27*(5), 661-673.

West, M., & Sheldon-Keller, A. (1992). The assessment of dimensions relevant to adult reciprocal attachment. *Canadian Journal of Psychiatry - Revue Canadienne de Psychiatrie, 37*(9), 600-606.

Wickrama, K. A., Conger, R. D., Lorenz, F. O., & Jung, T. (2008). Family antecedents and consequences of trajectories of depressive symptoms from adolescence to young adulthood: a life course investigation. *Journal of Health & Social Behavior, 49*(4), 468-483.

Wight, R. G., Botticello, A. L., & Aneshensel, C. S. (2009). Socioeconomic context, social support, and adolescent mental health: A multilevel investigation. *Journal of Youth and Adolescence, 35*(1), 115-126.

Wille, N., Bettge, S., Ravens-Sieberer, U., & group, B. s. (2008). Risk and protective factors for children's and adolescents' mental health: results of the BELLA study. *European Child & Adolescent Psychiatry, 17 Suppl 1*, 133-147.

Willemen, A. M., Schuengel, C., & Koot, H. M. (2009). Physiological regulation of stress in referred adolescents: The role of the parent-adolescent relationship. *Journal of Child Psychology and Psychiatry, 50*(4), 482-490.

Wilson, C. J., & Deane, F. P. (2010). Help-negation and suicidal ideation: the role of depression, anxiety and hopelessness. *Journal of Youth & Adolescence, 39*(3), 291-305.

Windle, M. (1992). A longitudinal study of stress buffering for adolescent problem behaviors. *Developmental Psychology, 28*, 552-530.

Winefield, H. R., Winefield, A. H., & Tiggemann, M. (1992). Social support and psychological well-being in young adults: The Multi-Dimensional Support Scale. *Journal of Personality Assessment, 58*(1), 198-210.

Winograd, G., Cohen, P., & Chen, H. (2008). Adolescent borderline symptoms in the community: Prognosis for functioning over 20 years.

WHOQOL-BREF Introduction, Administration, Scoring and Generic Version of the Assessment. (1996). World Health Organisation, Geneva.

Wright, A., Harris, M., Wiggers, J., Jorm, A., Cotton, S., Harrigan, S., et al. (2005). Recognition of depression and psychosis by young Australians and their beliefs about treatment. *Medical Journal of Australia, 183*, 18-23.

Wright, M. O., Crawford, E., Del Castillo, D., Wright, M. O. D., Crawford, E., & Del Castillo, D. (2009). Childhood emotional maltreatment and later psychological distress among college students: the mediating role of maladaptive schemas. *Child Abuse & Neglect, 33*(1), 59-68.

Wright, R. D., Botticello, A. L., & Aneshensel, C. S. (2006). Socioeconomic Context, Social Support, and Adolescent Mental Health: A Multilevel Investigation. *Journal of Youth and Adolescence 35*(1), 115-126.

Ybrandt, H. (2010). Risky alcohol use, peer and family relationships and legal involvement in adolescents with antisocial problems. *Journal of Drug Education, 40*(3), 245-264.

Ystgaard, M., Tambs, K., & Dalgard, O. (1999). Life stress, social support and psychological distress in late adolescence: A longitudinal study.

Ystgaard, M., Tambs, K., & Dalgard, O. S. (1999). Life stress, social support and psychological distress in late adolescence: a longitudinal study. *Social Psychiatry & Psychiatric Epidemiology, 34*(1), 12-19.

Zachrisson, H. D., & Kulbotten, G. R. (2006). Attachment in anorexia nervosa: an exploration of associations with eating disorder psychopathology and psychiatric symptoms. *Eating & Weight Disorders: EWD, 11*(4), 163-170.

Zahn-Waxler, C., Cole, P. M., & Barrett, K. C. (1991). Guilt and empathy: Sex differences and implications for the development of depression. In J. Garber & K. A. Dodge (Eds.), *The development of emotion regulation and dysregulation* (pp. 243-272). Cambridge: Cambridge University Press.

Zaitsoff, S. L., & Grilo, C. M. (2010). Eating disorder psychopathology as a marker of psychosocial distress and suicide risk in female and male adolescent psychiatric inpatients. *Comprehensive Psychiatry, 51*(2), 142-150.

Zajac, K., & Kobak, R. (2009). Caregiver unresolved loss and abuse and child behavior

problems: Intergenerational effects in a high-risk sample. *Development and Psychopathology, 21 (1)*, 173-187.

Zappa, L. E., Caslini, M., Pini, E., & Clerici, M. (2010). Alexithymia in eating disorders: A useful association? A review. *Minerva Psichiatrica, 51 (2)*, 105-126.

Zeanah, C. H., & Benoit, D. (1995). Clincial applications of a parent perception interview in infant mental health. *Child and Adolescent Clinics in North America, 4*(3), 539-554.

Zeanah, C. H., Boris, N. W., & Larrieu, J. A. (1997). Infant development and developmental risk: A review of the past 10 years. [Review]. *Journal of the American Academy of Child and Adolescent Psychiatry, 36 (2)*, 165-178.

Zeman, J., Cassano, M., Perry-Parrish, C., & Stegall, S. (2006). Emotion regulation in children and adolescents. *Journal of Developmental & Behavioral Pediatrics, 27*(2), 155-168.

Zeman, J., Klimes-Dougan, B., Cassano, M., & Adrian, M. (2007). Measurement issues in emotion research with children and adolescents. . *Clinical Psychology: Science & Practice, 14*, 377-401.

Zhang, F., & Labouvie-Vief, G. . (2004). Stability and fluctuation in adult attachment style over a 6-year period. *Attachment and Human Development, 6*, 419-437.

Zimmermann, P. (1999). Structure and functions of internal working models of attachment and their role for emotion regulation. *Attachment & Human Development, 1*(3), 291-306.

Zimmermann, P., Mohr, C., & Spangler, G. (2009). Genetic and attachment influences on adolescents' regulation of autonomy and aggressiveness. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 50 (11)*, 1339-1347.

Zlotnick, C., Wolfsdorf, B., Johnson, B., & Spirito T. . (2003). Impaired self-regulation and suicidal behavior among adolescent and young adult psychiatric inpatients. *Archives of Suicide Research, 7*(2), 149-158.

Zlotnick, C., Donaldson, D., Spirito, A., & Pearlstein, T. (1997). Affect regulation and suicide attempts in adolescent inpatients. *Journal of the American Academy of Child & Adolescent Psychiatry, 36*(6), 793-798.

Zonnevylle-Bender, M. J. S., Van Goozen, S.H.M., Cohen-Kettenis, P.T., Van Elburg, A., & Van Engeland, H. (2002). Do adolescent anorexia nervosa patients have deficits in emotional functioning? *European Child & Adolescent Psychiatry, 11*, 38-42.

Zonnevylle-Bender, M. J. S., Van Goozen, S.H.M., Cohen-Kettenis, P.T., Van Elburg, A., & Van Engeland, H. . (2004). Emotional functioning in adolescent anorexia nervosa patients: A controlled study. *European Child & Adolescent Psychiatry, 13*, 28-34.

Zonnevylle-Bender, M. J. S., Van Goozen, S.H.M., Cohen-Kettenis, P.T., Jansen, L.M., Van Elburg, A., & Van Engeland, H. (2005). Adolescent anorexia nervosa patients have a discrepancy between neurophysiological responses and self-reported emotional arousal to psychosocial stress. . *Psychiatry Research, 135*(1), 45-52.

Appendices

Appendix 1

Published work

Macbeth, A., Gumley, A., Schwannauer, M. & Fisher, R. (2011) Attachment states of mind, mentalization and their correlates in a first episode psychosis sample. *Psychology and Psychotherapy: Theory, Research and Practice* 84, 42-57.

Appendix 2

Ethics

Letter confirming ethical approval from NHS Lothian

Letter confirming ethical approval for amendments made

Letter confirming management approval from local R&D site

Participant Information Sheet

Participant Consent Form

Letter confirming ethical approval from NHS

Lothian NHS Board

RECEIVED
6 MAY 2008

Lothian Research Ethics Committees
Deaconess House
148 Pleasance
Edinburgh
EH8 9RS
Telephone 0131 536 9000
Fax 0131 536 9346
www.nhslothian.scot.nhs.uk

NHS Lothian

Miss Rebecca Ludford
Assistant psychologist
NHS Lothian
CAMHS, The Young People's Unit
Tipperlinn Road
Edinburgh
EH10 5HF

Date 2 May 2008
Our Ref 08/S1101/4
Enquiries to Chris Graham
Extension 89027
Direct Line 0131 536 9027
Email chris.graham@lhb.scot.nhs.uk

Dear Miss Ludford

Full title of study: **How do attachment states of mind, based on childhood experience, affect current day psychological functioning of adolescents with mental health difficulties?**

REC reference number: **08/S1101/4**

Thank you for your letter of 8 April 2008, responding to the Committee's request for further information on the above research and submitting revised documentation, subject to the conditions specified below.

The further information has been considered on behalf of the Committee by the Chair.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised.

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

Management permission at NHS sites ("R&D approval") should be obtained from the relevant care organisation(s) in accordance with NHS research governance arrangements.

INVESTOR IN PEOPLE

POSITIVE ABOUT DISABLED PEOPLE

NHS Lothian

Guidance on applying for NHS permission is available in the Integrated Research Application System or at http://www.rdforum.nhs.uk.

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

Document	*Version*	*Date*
Application	5.5	21 December 2007
Investigator CV		18 December 2007
Protocol	1.0	18 December 2007
Letter from Sponsor		20 December 2007
Inventory of Interpersonal Problems (IIP-32)		
Antonovsky's Sense of Coherence Scale		
General Efficacy Scale		
Life Events Inventory		
Adolescent Coping Scale		
GP/Consultant Information Sheets	1.0	18 December 2007
Participant Information Sheet	1.0	14 December 2007
Participant Information Sheet	2	26 February 2008
Participant Consent Form	1.0	14 December 2007
Response to Request for Further Information		29 February 2008
Response to Request for Further Information		28 April 2008
Adult Attachment Interview Protocol		
AAI Prompt Sheet	2	08 April 2008
Significant Others Scale		
Supervisors CV - M Schwannauer		

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

NHS
Lothian

After ethical review

Now that you have completed the application process please visit the National Research Ethics Website > After Review

You are invited to give your view of the service that you have received from the National Research Ethics Service and the application procedure. If you wish to make your views known please use the feedback form available on the website.

The attached document "After ethical review – guidance for researchers" gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Progress and safety reports
- Notifying the end of the study

The NRES website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

We would also like to inform you that we consult regularly with stakeholders to improve our service. If you would like to join our Reference Group please email referencegroup@nres.npsa.nhs.uk.

08/S1101/4 ~ Please quote this number on all correspondence

With the Committee's best wishes for the success of this project

Yours sincerely

C Graham

pp **Mr Nicholas Grier**
Chair

Enclosures: "After ethical review – guidance for researchers"

Copy to: *Dr Janet Hanley, Research & Development Office, Capacity and Capability Development, Queen's Medical Research Institute, 47 Little France Crescent, Edinburgh EH16 4TJ*

Letter confirming ethical approval for amendments made

Lothian NHS Board

Lothian Research Ethics Committees
Deaconess House
148 Pleasance
Edinburgh
EH8 9RS
Telephone 0131 536 9000
Fax 0131 536 9346
www.nhslothian.scot.nhs.uk

NHS Lothian

RECEIVED 12 NOV 2009

Miss Rebecca Ludford
Assistant psychologist
NHS Lothian
CAMHS, The Young People's Unit
Tipperlinn Road
Edinburgh
EH10 5HF

Date 10 November 2009
Our Ref 08/S1101/4
Enquiries to Chris Graham
Extension 89027
Direct Line 0131 536 9027
Email chris.graham@lhb.scot.nhs.uk

Dear Miss Ludford

Dear

Study title: **How do attachment states of mind, based on childhood experience , affect current day psychological functioning of adolescents with mental health difficulties?**
REC reference: **08/S1101/4**
Amendment number: **1**
Amendment date: **08 October 2009**

The above amendment was reviewed at the meeting of the Sub-Committee held on 10 November 2009 by the Sub-Committee in correspondence.

Ethical opinion

The members of the Committee taking part in the review gave a favourable ethical opinion of the amendment on the basis described in the notice of amendment form and supporting documentation.

Approved documents

The documents reviewed and approved at the meeting were:

Document	Version	Date
Questionnaire: Beck Depression Scale		
Questionnaire: Regulation of Emotion Questionnaire		
Questionnaire: Social Support Scale		
Questionnaire: QOL		
Notice of Substantial Amendment (non-CTIMPs)	1	08 October 2009
Protocol	2	08 October 2009

INVESTOR IN PEOPLE

POSITIVE ABOUT DISABLED PEOPLE

NHS Lothian

Membership of the Committee

The members of the Committee who took part in the review are listed on the attached sheet.

R&D approval

All investigators and research collaborators in the NHS should notify the R&D office for the relevant NHS care organisation of this amendment and check whether it affects R&D approval of the research.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

08/S1101/4:	**Please quote this number on all correspondence**

Yours sincerely

Emily Pendleton
Committee Co-ordinator

E-mail: emily.pendleton@nhslothian.scot.nhs.uk

Enclosures: *List of names and professions of members who took part in the review*

Copy to: *Dr Janet Hanley, Centre for Integrated Healthcare, Napier University*

South East Scotland Research Ethics Committee 01

Attendance at Sub-Committee of the REC meeting on 30 October 2009

Name	*Profession*	*Capacity*
Mr Nicholas Grier	Lecturer	Lay
Dr James Walker	Consultant Physician	Expert

Letter confirming management approval from local R&D site

University Hospitals Division

Queen's Medical Research Institute
47 Little France Crescent, Edinburgh, EH16 4TJ

NHS Lothian

RESEARCH & DEVELOPMENT OFFICE
Room E1.12
Tel: 0131 242 3330
Fax: 0131 242 3343
Email:R&DOffice@luht.scot.nhs.uk

Director: Professor Heather A Cubie

CS/JB/approval/2c

30 June 2008

Miss Rebecca Ludford
NHS Lothian
CAMHS, The Young People's Unit
Tipperlinn Road
Edinburgh
EH10 5HF

Dear Miss Ludford

MREC No:	**N/A**
CRF No:	**N/A**
LREC No:	**08/S1101/4**
R&D ID No:	**2008/P/PSY/12**
Title of Research	How do attachment states of mind, based on childhood experience, affect current day psychological functioning of adolescents with mental health difficulties?
Protocol No/Acronym:	**Research Protocol V1.0 dated 18 December 2007**

The above project has undergone an assessment of risk to NHS Lothian and review of resource and financial implications. I am satisfied that all the necessary arrangements have been set in place and that all Departments contributing to the project have been informed.

NHS Lothian agrees to act as Co-Sponsor with University of Edinburgh. Appropriate responsibilities are delineated in the academic agreement between NHS Lothian and University of Edinburgh issued with this letter

On behalf of the Chief Executive, I am happy to grant management approval from NHS Lothian to allow the project to commence, subject to the approval of the appropriate Research Ethics Committee(s) having also been obtained. You should note that any substantial amendments must be notified to the relevant Research Ethics Committee and to R&D Management with approval being granted from both before the amendments are made.

Please note that under Section A, Q35, NHS Lothian provides indemnity for negligence for NHS and Honorary clinical staff for research associated with their clinical duties. It is not empowered to provide non-negligent indemnity cover for patients. NHS Lothian does not provide indemnity against negligence for healthy volunteer studies. This is the personal responsibility of both NHS and honorary employees and is usually arranged with a medical defence organisation or through the University of Edinburgh.

This letter of approval is your assurance that NHS Lothian is satisfied with your study. As Chief Investigator or local Principal Investigator, you should be fully committed to your responsibilities within the Research Governance Framework for Health and Community Care, an extract of which is attached to this letter.

Yours sincerely

Dr Charles P Swainson
Medical Director

Enc	Research Governance Certificate	☑ (to be signed and returned)
	Tissue Policy (if applicable)	☐
	MTA (if applicable)	☐ (to be signed and returned by the recipient of Tissue)

Copies ***Administrators, Research Ethics Committee***

Participant Information Sheet

Participant Information Sheet

Study Title: The effect of attachment in adolescent mental health difficulties

Dear

I would like to invite you to take part in a research study. My name is Rebecca Fisher and I am an assistant psychologist conducting a research project for a PhD. Before you decide if you would like to take part it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and if you wish to discuss it with somebody. You do not need to decide whether or not to take part immediately.

Please ask me any questions. You can phone and speak to me on the following number 0131 537 5948. If I am not in, then you can leave a message and I will return your call.

What is the research about?

This research has two aims.

1. How do childhood experiences affect the day to day functioning of adolescents with mental health difficulties?
2. To investigate how adolescents cope with difficulties and how they manage their emotions.

Why have I been asked to take part?

I am asking all people who are in touch with CAMHS to take part in this study.

Do I have to take part?

No. It is up to you to decide whether or not to take part. If you decide to take part I would like you to sign a consent form. The consent form is a way of making sure you know what you have agreed to. If you decide to take part you are still free to withdraw at any time and you do not have to give a reason.

The support and help you receive from your team will not be affected if you decide at anytime you do not want to take part.

What will happen next?

If you decide to take part, I will be in touch and we will arrange a convenient time and place to meet. I would like to meet with you on three separate occasions.

What do I have to do?

At our first meeting I will answer any questions or concerns you may have. During these meetings I will ask you about your experience of mental health difficulties, how you are managing them and your childhood experiences. Examples of childhood experiences that I will ask you about include describing your past and present relationship with each of your parents, any separations from your parents that you remember and what would happen if you were upset as a child.

I will also ask you if part of one meeting can be recorded on a tape recorder. The purpose of the recording part of our conversation is because one of the measures I would like to use relies on your exact words that you use during the interview. I will

transcribe what you have said, take out any information that would identify you personally (e.g. names of people), and destroy the recording.

I will show you the recording equipment and demonstrate how it works before starting recording. You are free to stop the recording at any time during the interview. Importantly there are no right or wrong answers. It is your perspective that I would like to hear.

What is the down side of taking part?

It is possible that our meeting(s) may cover topics that are difficult or distressing for you to talk about. If you feel distressed we can stop the interview. You can also take a break at any time.

Will my taking part in this study be kept confidential?

If you decide to take part in the study, your GP and clinical team will know that you are taking part. The interviews and questionnaires will be confidential and all data will be annonymised. If there is anything in the interviews and questionnaires that you feel would be useful to share with your key worker then we can arrange this for you.

What are the possible benefits of taking part?

The information I learn from this study will help me plan future research and contribute to the development of new psychological therapies to help alleviate the distress of mental health difficulties.

What will happen to the results of the research study?

I will provide you with a summary of the results of the study. The final results and conclusions of the study will lead to several publications in scientific journals. Your identification will not be included in any publication.

Who is organising and funding the research

The research is being organised by the University of Edinburgh in collaboration with and funded by NHS Lothian.

Who has reviewed the study?

The research has been reviewed by and given managerial approval by the local Research and Development Departments in Lothian. It has also been reviewed by the Lothian Research Ethics Committee.

Thank you very much for reading this and for any further involvement with this study.

Participant Consent Form

CONSENT FORM

Title of Project: The effect of attachment in adolescent mental health difficulties

Name of Researcher: Rebecca Fisher

Please initial box

I confirm that I have read and understand the Participant Information sheet dated 16th February (Version 4) for the above study and have had the opportunity to ask questions. ☐

I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason, without my medical care or legal rights being affected. ☐

I understand that part of one interview will be tape recorded solely for the purposes of the research study as described in the Participant Information Sheet (4th August 2008). ☐

I understand that the information obtained from all measures that I complete as part of the research study will be annonymised. ☐

I understand that the clinical team will be appropriately informed of any information obtained, in order to provide me with a care package that is more responsive to my needs. ☐

After the interviews have been transcribed, and all names, places and identifiers have been removed I understand that the researcher may publish direct quotations. ☐

I understand that my GP will be informed that I have consented to take part in the study. ☐

I agree to take part in the above study. ☐

_____	_____	_____
Name of participant	Date	Signature
_____	_____	_____
Name of person taking consent (if different from researcher)	Date	Signature
_____	_____	_____
Researcher	Date	Signature

1 for participant, 1 for researcher, 1 to be kept with medical notes and 1 to be sent to GPs.

Appendix 3

Measures

Assessment Proforma

Demographic Form

Significant Others Scale *) (Power, M.J., Champion, L.A. and Aris, S.J., 1998)*

Inventory of Interpersonal Problems – 32 *(Horrowitz et al., 2000)*

Adolescent Coping Scale *(Frydenberg and Lewis 1993)*

Life Events Inventory *(Brown and Harris, 1989)*

World Health Organisation Quality of Life *(WHO QOL BREF)*

Beck Depression Scale II *(Beck, Steer and Brown, 1996)*

Regulation of Emotions Questionnaire 2 *(Phillips and Power, 2007)*

Social Support Questionnaire*(Sommer & Fydrich, 1991)*

Adult Attachment Interview Protocol (*George, Kaplan and Main.,1985)*

Assessment Proforma

Participant Identifier: _____

Date Consented: _____

Research Measure	Date completed
Demographics	
Significant Others Scale (SOS)	
Inventory of Interpersonal Difficulties (IIP – 32)	
Adolescent Coping Scale (ACS)	
Life Events Inventory (LEI)	
WHOQOL BREF	
Beck Depression Inventory (BDI)	
Emotion Regulation Questionnaire (ERQ2)	
Social Support (SS)	
Adult Attachment Interview (AAI)	
COMPLETED	

Demographic form

Interview Schedule

Date: **ID:**

DOB: **Age:**

Gender: **Ethnicity:**

- **Who lives with you at present:**

- **Are you married/ cohabiting?**
- **Do you have any children?**
- **Excluding people that live with you, how many relatives live within 20 miles?**

With whom are you in regular contact with?

- **Have any relatives had difficulties with their mental health?**

Excluding people that you live with, how many friends live within 20 miles?

With whom are you in regular contact with?

- **Are you in school?**

What year?

What exams have you taken or are taking?

If no **Did you sit any exams before you left school?**

- **Did you/ do you attend college?**

What year(s)?

What did you study?

Did you complete the course?

- **After you left school have you ever done or are you doing a full time or part time educational or training course?**

What year(s)?

What course did you do?

Did you complete the course?

- **Did you/ do you attend university?**

What year(s)?

What did you study?

Did you complete the course?

- **Are you employed at present?**

If unemployed – **What year did you last work?**

Is it your choice not to work outside the home?

If employed - **Can you tell me what you do?**

How long have you been in this job?

How many jobs have you had since leaving school?

- **Do you drink alcohol?**

Units a week:

- **Do you use recreational drugs or any other substances?**

Which one(s):

How often?

- **Do you have any general health problems that stop you from doing the things you have to do?**

- **Do you feel you have difficulties with your mental health?**

- **Since when have you experienced difficulties with your mental health?**

Age/ circumstances

Has this been a continual difficulty?
If not – how many episodes? And when? What age?

To what extent does this difficulty disrupt your daily life?

Do you feel this difficulty gets in the way of what you feel able to do?

- **Have you been admitted to hospital for this mental health difficulty?**

How many times in last 5 years?

How long on each occasion?

- **Do you take medication?**

Dose and length?

Have you been prescribed any other medication in the last 5 years?

- **How often do you see your doctor (e.g. psychiatrist)?**

- **Do you see a psychologist?**

How often? For how long?

- **Are there any other professionals you see regularly (e.g. nurses/ social workers, GP etc)?**

- **What non medication treatment have you received?**

- **What treatment do you perceive as being the most effective for you?**

- **Is there a kind of treatment you would like to receive but have not so far?**

Significant Others Scale

For each person listed below please circle a number from 1 to 7 to show how well he or she provides the type of help that is listed. The second part of each question asks you to rate how you would like things to be if they were exactly as you hoped for. As before please put a circle round one number between 1 and 7 to show what your rating is.

Person 1 – Partner	Never			Sometimes			Always
1 a) Can you trust, talk to frankly and share your feelings with this person?....	1	2	3	4	5	6	7
b) What rating would your ideal be?.....	1	2	3	4	5	6	7
2 a) Can you lean on and turn to this person in times of difficulty?.....	1	2	3	4	5	6	7
b) What rating would your ideal be?.....	1	2	3	4	5	6	7
3 a) Does he/ she give you practical help?.....	1	2	3	4	5	6	7
b) What rating would your ideal be?.....	1	2	3	4	5	6	7
4 a) Can you spend time with him/ her socially?.....	1	2	3	4	5	6	7
b) What rating would your ideal be?.....	1	2	3	4	5	6	7
5 a) Can you get physical comfort from him/ her?.....	1	2	3	4	5	6	7
b) What rating would your ideal be?.....	1	2	3	4	5	6	7

Person 2 – A Close Relative (state relationship……..).	Never			Sometimes			Always
1 a) Can you trust, talk to frankly and share your feelings with this person?....	1	2	3	4	5	6	7
b) What rating would your ideal be?.....	1	2	3	4	5	6	7
2 a) Can you lean on and turn to this person in times of difficulty?.....	1	2	3	4	5	6	7
b) What rating would your ideal be?.....	1	2	3	4	5	6	7
3 a) Does he/ she give you practical help?.....	1	2	3	4	5	6	7
b) What rating would your ideal be?.....	1	2	3	4	5	6	7
4 a) Can you spend time with him/ her socially?.....	1	2	3	4	5	6	7
b) What rating would your ideal be?.....	1	2	3	4	5	6	7
5 a) Can you get physical comfort from him/ her?.....	1	2	3	4	5	6	7
b) What rating would your ideal be?.....	1	2	3	4	5	6	7

Person 3 – A Close Friend	Never			Sometimes			Always
1 a) Can you trust, talk to frankly and share your feelings with this person?....	1	2	3	4	5	6	7
b) What rating would your ideal be?.....	1	2	3	4	5	6	7
2 a) Can you lean on and turn to this person in times of difficulty?.....	1	2	3	4	5	6	7
b) What rating would your ideal be?.....	1	2	3	4	5	6	7
3 a) Does he/ she give you practical help?.....	1	2	3	4	5	6	7
b) What rating would your ideal be?.....	1	2	3	4	5	6	7
4 a) Can you spend time with him/ her socially?.....	1	2	3	4	5	6	7
b) What rating would your ideal be?.....	1	2	3	4	5	6	7
5 a) Can you get physical comfort from him/ her?.....	1	2	3	4	5	6	7
b) What rating would your ideal be?.....	1	2	3	4	5	6	7

Person 4 –(state relationship…….).	Never			Sometimes			Always
1 a) Can you trust, talk to frankly and share your feelings with this person?....	1	2	3	4	5	6	7
b) What rating would your ideal be?.....	1	2	3	4	5	6	7
2 a) Can you lean on and turn to this person in times of difficulty?.....	1	2	3	4	5	6	7
b) What rating would your ideal be?.....	1	2	3	4	5	6	7
3 a) Does he/ she give you practical help?.....	1	2	3	4	5	6	7
b) What rating would your ideal be?.....	1	2	3	4	5	6	7
4 a) Can you spend time with him/ her socially?.....	1	2	3	4	5	6	7
b) What rating would your ideal be?.....	1	2	3	4	5	6	7
5 a) Can you get physical comfort from him/ her?.....	1	2	3	4	5	6	7
b) What rating would your ideal be?.....	1	2	3	4	5	6	7

Person 5 –(state relationship…….).	Never			Sometimes			Always
1 a) Can you trust, talk to frankly and share your feelings with this person?....	1	2	3	4	5	6	7
b) What rating would your ideal be?.....	1	2	3	4	5	6	7
2 a) Can you lean on and turn to this person in times of difficulty?.....	1	2	3	4	5	6	7
b) What rating would your ideal be?.....	1	2	3	4	5	6	7
3 a) Does he/ she give you practical help?.....	1	2	3	4	5	6	7
b) What rating would your ideal be?.....	1	2	3	4	5	6	7
4 a) Can you spend time with him/ her socially?.....	1	2	3	4	5	6	7
b) What rating would your ideal be?.....	1	2	3	4	5	6	7
5 a) Can you get physical comfort from him/ her?.....	1	2	3	4	5	6	7
b) What rating would your ideal be?.....	1	2	3	4	5	6	7

Person 6 –(state relationship…….).	Never			Sometimes			Always
1 a) Can you trust, talk to frankly and share your feelings with this person?....	1	2	3	4	5	6	7
b) What rating would your ideal be?.....	1	2	3	4	5	6	7
2 a) Can you lean on and turn to this person in times of difficulty?.....	1	2	3	4	5	6	7
b) What rating would your ideal be?.....	1	2	3	4	5	6	7
3 a) Does he/ she give you practical help?.....	1	2	3	4	5	6	7
b) What rating would your ideal be?.....	1	2	3	4	5	6	7
4 a) Can you spend time with him/ her socially?.....	1	2	3	4	5	6	7
b) What rating would your ideal be?.....	1	2	3	4	5	6	7
5 a) Can you get physical comfort from him/ her?.....	1	2	3	4	5	6	7
b) What rating would your ideal be?.....	1	2	3	4	5	6	7

Inventory of Interpersonal Problems – 32

IIP-32 Question/ Scoring Sheet

Name: _____

Date: ____ /____ /____ (Month / Day / Year) Sex: Male ☐ Female ☐

People have reported having the following problems in relating to other people. Please read the list below, and for each item, consider whether it has been a problem for you with respect to **any** significant person in your life. Then fill in the numbered circle that describes how distressing that problem has been.

The following are things you find hard to do with other people. **It is hard for me to:**	Not at all	A little bit	Moderately	Quite a bit	Extremely	
1. Say "no" to other people	⓪	①	②	③	④	1.
2. Join in on groups	⓪	①	②	③	④	2.
3. Keep things private from other people	⓪	①	②	③	④	3.
4. Tell a person to stop bothering me	⓪	①	②	③	④	4.
5. Introduce myself to new people	⓪	①	②	③	④	5.
6. Confront people with problems that come up	⓪	①	②	③	④	6.
7. Be assertive with another person	⓪	①	②	③	④	7.
8. Let other people know when I am angry	⓪	①	②	③	④	8.
9. Socialize with other people	⓪	①	②	③	④	9.
10. Show affection to people	⓪	①	②	③	④	10.
11. Get along with people	⓪	①	②	③	④	11.
12. Be firm when I need to be	⓪	①	②	③	④	12.
13. Experience a feeling of love for another person	⓪	①	②	③	④	13.
14. Be supportive of another person's goals in life	⓪	①	②	③	④	14.
15. Feel close to other people	⓪	①	②	③	④	15.
16. Really care about other people's problems	⓪	①	②	③	④	16.
17. Put somebody else's needs before my own	⓪	①	②	③	④	17.
18. Feel good about another person's happiness	⓪	①	②	③	④	18.
19. Ask other people to get together socially with me	⓪	①	②	③	④	19.
20. Be assertive without worrying about hurting the other person's feelings	⓪	①	②	③	④	20.
The following are things that you do too much.						
21. I open up to people too much.	⓪	①	②	③	④	21.
22. I am too aggressive toward other people.	⓪	①	②	③	④	22.
23. I try to please other people too much.	⓪	①	②	③	④	23.
24. I want to be noticed too much.	⓪	①	②	③	④	24.
25. I try to control other people too much.	⓪	①	②	③	④	25.
26. I put other people's needs before my own too much.	⓪	①	②	③	④	26.
27. I am overly generous to other people.	⓪	①	②	③	④	27.
28. I manipulate other people too much to get what I want.	⓪	①	②	③	④	28.
29. I tell personal things to other people too much.	⓪	①	②	③	④	29.
30. I argue with other people too much.	⓪	①	②	③	④	30.
31. I let other people take advantage of me too much.	⓪	①	②	③	④	31.
32. I am affected by another person's misery too much.	⓪	①	②	③	④	32.

THE PSYCHOLOGICAL CORPORATION®
A Harcourt Assessment Company

3 4 5 6 7 8 9 10 11 12 A B C D E

0158132548

Adolescent Coping Scale

Adolescent Coping Scale: General Short Form

Students have a number of concerns or worries about things such as work, family, friends, the world and the like. Below is a list of ways in which people of your age cope with a wide variety of concerns or problems. Please indicate by circling the appropriate number, the things you do to deal with your concerns or worries. Work down the page and circle 1, 2, 3, 4 or 5 as you come to each statement. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which best describes how you feel.

	Doesn't apply or don't do it	Used very little	Used some-times	Used often	Used a great deal
1. Talk to other people about my concern to help me sort it out.	1	2	3	4	5
2. Work at solving the problem to the best of my ability.	1	2	3	4	5
3. Work hard	1	2	3	4	5
4. Worry about what will happen to me	1	2	3	4	5
5. Spend more time with boy/girl friend	1	2	3	4	5
6. Improve my relationship with others	1	2	3	4	5
7. Wish a miracle would happen	1	2	3	4	5
8. I have no way of dealing with the situation	1	2	3	4	5
9. Find a way to let off steam e.g. cry, scream, drink, take drugs etc.	1	2	3	4	5
10. Join with people who have the same concern	1	2	3	4	5
11. Shut myself off from the problem so that I can avoid it	1	2	3	4	5
12. See myself as being at fault	1	2	3	4	5
13. Don't let others know how I am feeling	1	2	3	4	5
14. Pray for help or guidance so that everything will be alright	1	2	3	4	5
15. Look on the bright side of things and think of all that is good	1	2	3	4	5
16. Ask a professional person for help	1	2	3	4	5
17. Make time for leisure activities	1	2	3	4	5
18. Keep fit and healthy	1	2	3	4	5
19. List any other things you do to cope with your concerns					

Adolescent Coping Scale: Specific Short Form

Students have a number of concerns or worries about things such as school, work, family, friends, the world and the like. Which is the main concern for you in terms of your life? Please describe your main concern very briefly in the space below:

.....

.....

Please indicate by circling the appropriate number, the things you do to deal with the particular concerns or worry you have just described.

	Doesn't apply or don't do it	Used very little	Used some-times	Used often	Used a great deal
1. Talk to other people about my concern to help me sort it out.	1	2	3	4	5
2. Work at solving the problem to the best of my ability.	1	2	3	4	5
3. Work hard	1	2	3	4	5
4. Worry about what will happen to me	1	2	3	4	5
5. Spend more time with boy/girl friend	1	2	3	4	5
6. Improve my relationship with others	1	2	3	4	5
7. Wish a miracle would happen	1	2	3	4	5
8. I have no way of dealing with the situation	1	2	3	4	5
9. Find a way to let off steam e.g. cry, scream, drink, take drugs etc.	1	2	3	4	5
10. Join with people who have the same concern	1	2	3	4	5
11. Shut myself off from the problem so that I can avoid it	1	2	3	4	5
12. See myself as being at fault	1	2	3	4	5
13. Don't let others know how I am feeling	1	2	3	4	5
14. Pray for help or guidance so that everything will be alright	1	2	3	4	5
15. Look on the bright side of things and think of all that is good	1	2	3	4	5
16. Ask a professional person for help	1	2	3	4	5
17. Make time for leisure activities	1	2	3	4	5
18. Keep fit and healthy	1	2	3	4	5
19. List any other things you do to cope with your concerns					

Life Events Inventory

Life Events Inventory (LEI)

Please indicate whether any of the following events have happened to you in the past <u>six months</u> by marking the appropriate box to indicate whether an event had a good or bad effect overall on your life.

Good	Bad	
☐	☐	You had a serious physical illness or injury
☐	☐	A close relative had a serious illness (from which they did not die)
☐	☐	You have been pregnant (or partner)
☐	☐	You had a miscarriage
☐	☐	You had an abortion
☐	☐	You experienced sexual difficulties
☐	☐	Your spouse or partner died
☐	☐	An immediate family member died
☐	☐	A close friend or relative died
☐	☐	You gained a new family member (immediate)
☐	☐	You got married
☐	☐	There has been an increase in serious arguments with your spouse or partner
☐	☐	There has been an increase in arguments with other family members (e.g. children)
☐	☐	There have been serious problems with a close friend, neighbour or relative not living at home
☐	☐	Your son or daughter left home
☐	☐	Your children went into care of others
☐	☐	You experienced trouble or behaviour problems with your children
☐	☐	Your spouse or partner began or stopped working
☐	☐	You have separated from your spouse or partner
☐	☐	You have reconciled with your spouse or partner
☐	☐	You began an extramarital affair
☐	☐	You experienced a break up of an affair
☐	☐	Your spouse/ partner began an extramarital affair
☐	☐	You have divorced or ended a steady relationship
☐	☐	A new person came to live in your household (apart from a new baby)
☐	☐	You studied for, or did, important exams
☐	☐	You failed an important exam
☐	☐	You have been unemployed or seeking work for a month or more
☐	☐	You began to have trouble or disagreements with your supervisors at work
☐	☐	You had a big change in the hours or conditions of your work
☐	☐	You started in a completely different type of job
☐	☐	Your income increased substantially (25%)
☐	☐	Your income decreased substantially (25%)
☐	☐	You had debts you were unable to repay
☐	☐	You went on holiday
☐	☐	You moved house
☐	☐	You purchased your own house (taking out mortgage)
☐	☐	You got new neighbours
☐	☐	You had quarrels with neighbours
☐	☐	You had minor difficulties with the police or the authorities (speeding, drunkenness)
☐	☐	You were sentenced to jail

☐	☐	You were involved in a fight
☐	☐	An immediate family member started drinking heavily
☐	☐	An immediate family member attempted suicide
☐	☐	An immediate family member was sent to prison
☐	☐	You had problems relating to alcohol and drugs
☐	☐	You experienced serious restrictions of your social life
☐	☐	You experienced a period of homelessness (e.g. hostel or sleeping rough)
☐	☐	Something you valued or cared for greatly was stolen or lost
☐	☐	Other Events (please specify):

.....

Please indicate whether any of these events has happened to you in <u>the past five years</u>.

If you can remember, please indicate the year when the event happened.

Good	*Bad*	*Year*	
☐	☐	_____	Have you had a serious illness or injury?
☐	☐	_____	Has a close relative had a serious illness or injury?
☐	☐	_____	Have you or your partner had a miscarriage or an abortion?
☐	☐	_____	Has anyone close to you, family or friend died?
☐	☐	_____	Have you broken off a steady relationship?
☐	☐	_____	Have you had any serious problems or major arguments with a close friend, neighbour or relative?
☐	☐	_____	Have you had to give up a training course or educational course that was important to you?
☐	☐	_____	Have you failed any important exams?
☐	☐	_____	Have you been forced to leave a job for any reason?
☐	☐	_____	Have you been unemployed for a month or more?
☐	☐	_____	Have you had debts you were unable to pay?
☐	☐	_____	Have you been attacked, raped or assaulted?
☐	☐	_____	Have you been burgled or had your property stolen or damaged?
☐	☐	_____	Have you had any involvement with the police, the courts or the legal profession?

If you have ever been married or lived with a partner in the last five years: -

☐	☐	_____	Have you separated from your partner for a month or more?
☐	☐	_____	Have you had a legal separation?
☐	☐	_____	Have you been divorced or begun divorce procedures?

World Health Organisation Quality of Life

WHOQOL–BREF

UK VERSION

Department of Mental Health

World Health Organisation

Geneva

For Office Use Only

	Equations for computing domain scores	Raw score	Transformed score	
			4-20	0-100
Domain 1	(6-Q3) + (6-Q4) + Q10 + Q15 + Q16 + Q17+ Q18 □ + □ + □ + □ + □ + □ + □	=		
Domain 2	Q5 + Q6 + Q7 + Q11 + Q19 + (6-Q26) □ + □ + □ + □ + □ + □	=		
Domain 3	Q20 + Q21 + Q22 □ + □ + □	=		
Domain 4	Q8 + Q9 + Q12 + Q13 + Q14 + Q23 + Q24 + Q25 □ + □ + □ + □ + □ + □ + □ + □	=		

ABOUT YOU

Before you begin we would like you to answer a few general questions about yourself: by **circling** the correct answer or by **filling in the space provided**.

What is your gender? MALE / FEMALE

What is your date of birth? ____/___/_____. (day/month/year.)

What is the highest education you've received?
None at all
Primary school
Secondary school
Tertiary

What is your marital status?
Single
Married
Living as married
Separated
Divorced
Widowed

Are you currently ill? YES / NO

If something is wrong with your health what do you think it is?
Please write your illness(s) or problem here:_____

Instructions

This questionnaire asks how you feel about your quality of life, health and other areas of your life. **Please answer all the questions**. If you are unsure about which response to give to a question, **please choose the ONE** that appears most appropriate. This can often be your first response.

Please keep in mind your standards, hopes, pleasures and concerns. We ask that you think about your life **in the last two weeks**. For example, thinking about the last two weeks, a question might ask:

		Not at all	Not much	Moderately	A great deal	Completely
	Do you get the kind of support from others that you need?	1	2	3	4	5

You should **circle** the number that best fits how much support you got from others **over the last two weeks**. So you would circle the number 4 if you got a great deal of support from others as follows:

		Not at all	Not much	Moderately	A great deal	Completely
	Do you get the kind of support from others that you need?	1	2	3	4	5

You would circle the number 1 if you did not get any of the support that you needed from others in the last two weeks. Please read each question, assess you feelings, and **circle** the number on the scale for each question that gives the best answer for you.

		Very poor	Poor	Neither poor nor good	Good	Very good
1	How would you rate your quality of life?	1	2	3	4	5

		Very Dissatisfied	Dissatisfied	Neither Satisfied nor Dissatisfied	Satisfied	Very Satisfied
2	How satisfied are you with your health?	1	2	3	4	5

The following questions ask about **how much** you have experienced certain things **in the last two weeks.**

		Not at all	A little	A moderate amount	Very much	An extreme amount
3	How much do you feel that pain prevents you from doing what you need to do?	1	2	3	4	5
4	How much do you need medical treatment to function in your daily life?	1	2	3	4	5
5	How much do you enjoy life?	1	2	3	4	5

		Not at all	A little	A moderate amount	Very much	Extremely
6	To what extent do you feel life to be meaningful?	1	2	3	4	5
7	How well are you able to concentrate?	1	2	3	4	5
8	How safe do you feel in your daily life?	1	2	3	4	5
9	How healthy is your physical environment?	1	2	3	4	5

The following questions ask about **how completely** you experience or were able to do certain things **in the last two weeks.**

		Not at all	A little	Moderately	Mostly	Completely
10	Do you have enough energy for everyday life?	1	2	3	4	5
11	Are you able to accept your bodily appearance?	1	2	3	4	5
12	To what extent do you have enough money to meet your needs?	1	2	3	4	5
13	How available to you is the information that you need in your day-to-day life?	1	2	3	4	5
14	To what extent do you have the opportunity for leisure activities?	1	2	3	4	5

The following questions ask you to say **how good** or **satisfied** you have felt about various aspects of your life **over the last two weeks**.

		Very poor	Poor	Neither poor nor good	Good	Very good
15	How well are you able to get around?	1	2	3	4	5

		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
16	How satisfied are you with your sleep?	1	2	3	4	5
17	How satisfied are you with your ability to perform daily living activities?	1	2	3	4	5
18	How satisfied are you with your capacity for work?	1	2	3	4	5
19	How satisfied are you with yourself?	1	2	3	4	5
20	How satisfied are you with your personal relationships?	1	2	3	4	5
21	How satisfied are you with your sex life?	1	2	3	4	5
22	How satisfied are you with the support you get from your friends?	1	2	3	4	5
23	How satisfied are you with the conditions of your living place?	1	2	3	4	5
24	How satisfied are you with your access to health services?	1	2	3	4	5
25	How satisfied are you with your transport?	1	2	3	4	5

The following question refers to **how often** you have felt or experienced certain things **in the last two weeks**.

		Never	Seldom	Quite often	Very often	Always
26	How often do you have negative feelings, such as blue mood, despair, anxiety, depression?	1	2	3	4	5

Did someone help you to fill out this form? YES / NO

THANK-YOU FOR YOUR HELP

Beck Depression Scale II

BDI-II

Date:

Name: _____ Marital Status: _____ Age: _____ Sex: _____

Occupation: _____ Education: _____

Instructions: This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and then pick out the **one statement** in each group that best describes the way you have been feeling during the **past two weeks, including today**. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Be sure that you do not choose more than one statement for any group, including Item 16 (Changes in Sleeping Pattern) or Item 18 (Changes in Appetite).

1. Sadness
- 0 I do not feel sad.
- 1 I feel sad much of the time.
- 2 I am sad all the time.
- 3 I am so sad or unhappy that I can't stand it.

2. Pessimism
- 0 I am not discouraged about my future.
- 1 I feel more discouraged about my future than I used to be.
- 2 I do not expect things to work out for me.
- 3 I feel my future is hopeless and will only get worse.

3. Past Failure
- 0 I do not feel like a failure.
- 1 I have failed more than I should have.
- 2 As I look back, I see a lot of failures.
- 3 I feel I am a total failure as a person.

4. Loss of Pleasure
- 0 I get as much pleasure as I ever did from the things I enjoy.
- 1 I don't enjoy things as much as I used to.
- 2 I get very little pleasure from the things I used to enjoy.
- 3 I can't get any pleasure from the things I used to enjoy.

5. Guilty Feelings
- 0 I don't feel particularly guilty.
- 1 I feel guilty over many things I have done or should have done.
- 2 I feel quite guilty most of the time.
- 3 I feel guilty all of the time.

6. Punishment Feelings
- 0 I don't feel I am being punished.
- 1 I feel I may be punished.
- 2 I expect to be punished.
- 3 I feel I am being punished.

7. Self-Dislike
- 0 I feel the same about myself as ever.
- 1 I have lost confidence in myself.
- 2 I am disappointed in myself.
- 3 I dislike myself.

8. Self-Criticalness
- 0 I don't criticize or blame myself more than usual.
- 1 I am more critical of myself than I used to be.
- 2 I criticize myself for all of my faults.
- 3 I blame myself for everything bad that happens.

9. Suicidal Thoughts or Wishes
- 0 I don't have any thoughts of killing myself.
- 1 I have thoughts of killing myself, but I would not carry them out.
- 2 I would like to kill myself.
- 3 I would kill myself if I had the chance.

10. Crying
- 0 I don't cry anymore than I used to.
- 1 I cry more than I used to.
- 2 I cry over every little thing.
- 3 I feel like crying, but I can't.

_____ Subtotal Page 1

Continued on Back

THE PSYCHOLOGICAL CORPORATION®
Harcourt Brace & Company
SAN ANTONIO
Orlando • Boston • New York • Chicago • San Francisco • Atlanta • Dallas
San Diego • Philadelphia • Austin • Fort Worth • Toronto • London • Sydney

0154018392

11. Agitation

0 I am no more restless or wound up than usual.
1 I feel more restless or wound up than usual.
2 I am so restless or agitated that it's hard to stay still.
3 I am so restless or agitated that I have to keep moving or doing something.

12. Loss of Interest

0 I have not lost interest in other people or activities.
1 I am less interested in other people or things than before.
2 I have lost most of my interest in other people or things.
3 It's hard to get interested in anything.

13. Indecisiveness

0 I make decisions about as well as ever.
1 I find it more difficult to make decisions than usual.
2 I have much greater difficulty in making decisions than I used to.
3 I have trouble making any decisions.

14. Worthlessness

0 I do not feel I am worthless.
1 I don't consider myself as worthwhile and useful as I used to.
2 I feel more worthless as compared to other people.
3 I feel utterly worthless.

15. Loss of Energy

0 I have as much energy as ever.
1 I have less energy than I used to have.
2 I don't have enough energy to do very much.
3 I don't have enough energy to do anything.

16. Changes in Sleeping Pattern

0 I have not experienced any change in my sleeping pattern.
1a I sleep somewhat more than usual.
1b I sleep somewhat less than usual.
2a I sleep a lot more than usual.
2b I sleep a lot less than usual.
3a I sleep most of the day.
3b I wake up 1–2 hours early and can't get back to sleep.

17. Irritability

0 I am no more irritable than usual.
1 I am more irritable than usual.
2 I am much more irritable than usual.
3 I am irritable all the time.

18. Changes in Appetite

0 I have not experienced any change in my appetite.
1a My appetite is somewhat less than usual.
1b My appetite is somewhat greater than usual.
2a My appetite is much less than before.
2b My appetite is much greater than usual.
3a I have no appetite at all.
3b I crave food all the time.

19. Concentration Difficulty

0 I can concentrate as well as ever.
1 I can't concentrate as well as usual.
2 It's hard to keep my mind on anything for very long.
3 I find I can't concentrate on anything.

20. Tiredness or Fatigue

0 I am no more tired or fatigued than usual.
1 I get more tired or fatigued more easily than usual.
2 I am too tired or fatigued to do a lot of the things I used to do.
3 I am too tired or fatigued to do most of the things I used to do.

21. Loss of Interest in Sex

0 I have not noticed any recent change in my interest in sex.
1 I am less interested in sex than I used to be.
2 I am much less interested in sex now.
3 I have lost interest in sex completely.

21 22 23 24 25 26 27 28 29 30 A B C D E

_____ Subtotal Page 2
_____ Subtotal Page 1
_____ Total Score

Regulations of Emotions questionnaire 2

Regulation of Emotion Questionnaire 2

We all experience lots of different feelings or emotions. For example, different things in our lives make us feel happy, sad, angry and so on...

The following questions ask you to think about **how often** you do certain things **in response to your emotions**. You do not have to think about specific emotions but just how often you **generally** do the things listed below.

Please tick the box corresponding to the answer that fits best. We all respond to our emotions in different ways so there are no right or wrong answers.

In GENERAL how do you respond to your emotions?	Never	Seldom	Often	Very Often	Always
1. I talk to someone about how I feel	○	○	○	○	○
2. I take my feelings out on others verbally (e.g. shouting, arguing)	○	○	○	○	○
3. I seek physical contact from friends or family (e.g. a hug, hold hands)	○	○	○	○	○
4. I review (rethink) my thoughts or beliefs	○	○	○	○	○
5. I harm or punish myself in some way	○	○	○	○	○
6. I do something energetic (e.g. play sport, go for a walk)	○	○	○	○	○
7. I dwell on my thoughts and feelings (e.g. It goes round and round in my head and I can't stop it)	○	○	○	○	○

In **GENERAL** how do you respond to your emotions?	Never	Seldom	Often	Very Often	Always
8. I ask others for advice	○	○	○	○	○
9. I review (rethink) my goals or plans	○	○	○	○	○
10. I take my feelings out on others physically (e.g. fighting, lashing out)	○	○	○	○	○
11. I put the situation into perspective	○	○	○	○	○
12. I concentrate on a pleasant activity	○	○	○	○	○
13. I try to make others feel bad (e.g. being rude, ignoring them)	○	○	○	○	○
14. I think about people better off and make myself feel worse	○	○	○	○	○
15. I keep the feeling locked up inside	○	○	○	○	○
16. I plan what I could do better next time	○	○	○	○	○
17. I bully other people (e.g. saying nasty things to them, hitting them)	○	○	○	○	○
18. I take my feelings out on objects around me (e.g. deliberately causing damage to my house, school or outdoor things)	○	○	○	○	○
19. Things feel unreal (e.g. I feel strange, things around me feel strange, I daydream)	○	○	○	○	○
20. I telephone friends or family	○	○	○	○	○
21. I go out and do something nice (e.g. cinema, shopping, go for a meal, meet people)	○	○	○	○	○

Thank you for your help.

Social support

Instructions:

This questionnaire is about your relationships towards significant people in general, e.g. to your spouse, your family, friends and acquaintances, colleagues and neighbours. We want to find out how you experience and appreciate these relationships. 'People' in the statements mean people which are important for you.

Below are number of statements. Beside each statement is a scale from 0 to 4,
0 means 'not at all, 4 means 'exactly right' please circle one number next to each statement, expressing how appropriate it is.

		Not at all				Exactly right
1.	There are people who accept me as I am.	0	1	2	3	4
2.	It is important for my friends/ acquaintances to hear my opinion on certain things.	0	1	2	3	4
3.	Some of my friends/ acquaintances exploit my helpfulness.	0	1	2	3	4
4.	I feel that important people reject me.	0	1	2	3	4
5.	There are many situations when people ask me for practical help (e.g. to run errands, to lend them something).	0	1	2	3	4
6.	Most people I know get on better with their acquaintances than I do.	0	1	2	3	4
7.	Many of my friends/ relatives have a similar attitude to life as I have.	0	1	2	3	4
8.	I could live much more freely if I didn't always have to think about my family/ friends.	0	1	2	3	4
9.	Sometimes I feel much better after a conversation.	0	1	2	3	4
10.	Sometimes when I'm under stress tasks are taken off my hands.	0	1	2	3	4
11.	Sometimes I feel everybody has something to criticise about me.	0	1	2	3	4
12.	I have someone I also get on with sexually.	0	1	2	3	4
13.	Often I bump into acquaintances who I feel easy about having a chat with.	0	1	2	3	4
14.	I wish people didn't keep nagging me all the time.	0	1	2	3	4
15.	I often feel like an outsider.	0	1	2	3	4
16.	I can ask my friends/ acquaintances to help me filling in forms.	0	1	2	3	4

Social Support (cont)

		Not at all				Exactly right
17.	With some friends/ relatives I can really be at ease.	0	1	2	3	4
18.	I feel my life is restricted by friends/ relatives.	0	1	2	3	4
19.	I wish others would give me more sympathy and affection.	0	1	2	3	4
20.	I am often asked for advice.	0	1	2	3	4
21.	I wish more security and closeness for myself.	0	1	2	3	4
22.	Often I think my friends/ relatives expect too much of me.	0	1	2	3	4
23.	There are people who stand by me even when I make mistakes.	0	1	2	3	4
24.	My friends/ relatives don't take my feelings seriously.	0	1	2	3	4
25.	There are people who always make me feel guilty.	0	1	2	3	4
26.	I have a very good relationship with enough people.	0	1	2	3	4
27.	There is a group of people (circle of friends) I feel part of.	0	1	2	3	4
28.	My friends/relatives can't understand that I also need time to myself.	0	1	2	3	4
29.	There are people who are really happy in my company.	0	1	2	3	4
30.	There are people who turn to me with their personal problems.	0	1	2	3	4
31.	Often I wish to stay somewhere that nobody knows me.	0	1	2	3	4
32.	Important people try to control my thoughts and actions.	0	1	2	3	4

Adult Attachment Interview Protocol

AAI – Prompt Sheet

1) **Could you start by helping me get orientated to your early family situation, where you lived and so on? If you could tell me where you were born, whether you moved around much, what your family did at various times for a living?**

If raised by several – Who would you say raised you?

- Did you see much of your grandparents (If died ascertain when i.e. Age of participant or age of parent). Did he/ she tell you much about this grandparent?
- Did you have any brothers or sisters living in the house, or anybody besides your parents? Are they living nearby now or do they live elsewhere?

2) **I'd like you try to describe your relationship with your parents as a young child. . . if you can start from as far back as you remember.**

3) **Now, I'd like you to chose five adjectives or words that reflect your relationship with your mother starting from as far back as you can remember in early childhood – but say 5 – 12 is fine.. I know this may take a bit of time so go ahead and think for a minute. .. then I'd like to ask you why you chose them. I'll write each one down as you give them to me.**

- Ok, now let me go through some more qu. About your description of your childhood with your mother. You say your relationship with her was _____ Can you think of a memory or an incident that would illustrate why you chose _____ to describe the relationship?
- *If general response given* That's a good general description but I'm wondering if there was a particular time that happened, that made you think of it as _____?
- Ask for a second incident if vague to show a continuing interest.

4) Repeat 3) for father

5) **Now I wonder, could you tell me, to which parent did you feel the closest to and why?**

6) **When you were upset as a child what would you do?** *Let them interpret question . . . and probe to understand what the participant means.*

- **When you upset emotionally when you were little what would do? Can you think of a specific time that happened?**
- **Can you remember what would happen when you were hurt physically?** Again, do any specific incidents come to mind?
- **Were you ever ill when you were little? Do you remember what would happen?**
- *If not volunteered spontaneously* I was just wondering do you remember being held by either of your parents at any of these times, when you were upset, ill, etc?

7) **What is the first time you remember being separated from your parents?**

- How did you respond? Do you remember how your parents responded?
- Are there any other separations that stand out in your mind?

8) **Did you ever feel rejected as a young child? Of course, looking back on it now you may realise it wasn't really rejection but what I'm trying to ask about here is whether you remember ever having been rejected in childhood.**

- How old were you when you first felt this way and what did you do?
- Why do you think your parents did those things, do you think they realised they were rejecting you?
- *If no examples are forthcoming* Did you ever feel pushed away or ignored?

9) **Were your parents ever threatening with you in any way – maybe for discipline or even jokingly?**

- Some people have told us that their parents would threaten to leave them or send them away from home
- Some people have memories of threats of some kind or behaviour that was abusive. Did anything like this happen to you or in your family?
    - How old were you at the time? Did it happen frequently?
    - Do you feel this experience affects you now as an adult?
- Did you have any such experiences involving people outside the family?

10) **In general – how do you think your overall experiences with your parents have affected your adult personality?**

- *Should pause to indicate expectation that the participant should be thoughtful regarding the question and is aware that answering may take some time*
- Are there any aspects to your early experiences that you feel were a set back in your development?
- *If named one or two setbacks* – Any other aspects that you think might have held your development back, or had a negative effect on the way you turned out?
- *If no experiences considered causing a set back* – Is there anything about your early experiences that might have held back your development?

11) **Why do you think your parents behaved as they did during your childhood?**

12) **Were there any other adults with whom you were close, like parents, as a child?**

13) **a. Did you experience the loss of a parent or other close loved one when you were a young child, e.g. a sibling or close family member?**

- Could you tell me about the circumstances, and how old you were at the time?
- How did you respond at the time?
- Was this death sudden or was it expected?
- Can you recall your feelings at that time?
- Have your feelings regarding this death changed much over this time?
- *If not volunteered* Did you attend the funeral, and what was this like for you?

- What would you say the effect was on your (other parent) and on your household, and how did this change over the years?

13) b. **Did you lose any other important persons during your childhood?**
- Same queries again

14) c. **Have you lost other close persons in adulthood?**
Same queries again

14) Other than any difficult experiences you've already described have you had any other experiences which you should regard as potentially traumatic?
- Let the participant free associate

15) Now I'd like to ask you a few more questions about your relationship with your parents. Were there any changes in your relationships with your parents after childhood? I'm looking at changes roughly between your childhood and adulthood. We will look at the present in a moment.

16) Now I'd like to ask you what is your relationship with your parents now as an adult – your current relationship.
- Do you have much contact? What would you say the relationship is currently like? Satisfaction or dissatisfaction?

17) We have been focusing quite a lot on childhood and growing up, is there anything you feel you have learned from your own childhood experience?

Appendix 4

Adult Attachment Interview

AAI Training Institute Attendance Certificate

Confirmation letter of 3 way reliability in coding the AAI

AAI Training Institute Attendance Certificate

Certificate of Attendance

On this day, July 20, 2007, David and Deanne Pederson certify that

Rebecca Ludford

has completed the Adult Attachment Training Institute held at University of Western Ontario from July 9 to July 20, 2007.

David R. Pederson — **Deanne Pederson**

Completion of this two week AAI Training Institute qualifies you to take the AAI Reliability Test and to have your name added to the official "List of Attendees". The full list of certified trainers and co-trainers includes Anders Broberg, Nino Dazzi, Sonia Gojman, Tord Ivarsson, Erik Hesse, Deborah Jacobvitz, Nancy Kaplan, Mary Main, David and Deanne Pederson, and June Sroufe.

Adult Attachment Training Institute

Confirmation letter of 3 way reliability in coding the AAI

January 15, 2009

Dear Rebecca Ludford,

We were glad to receive your most recent work with the AAI, and are happy to report that your Group I three-way coding has held steady. You are good at the analysis of the organized categories of the AAI, and have been in Group I across the entire test on this dimension.

We are sorry to say that on this check, as on previous checks, we find you placed in Group II with respect to the four-way (Ds, E, F, U) analysis. This time there was a tendency to over-code U, but also a bit of under-coding. U/nonU is the most difficult part of the AAI for many people – you are not alone! We have calculated whether sending you the fourth round (AA) right now would make it possible for you to pass four-ways, but we see, unfortunately, that it would not.

At this point, then, you are not yet a "certified" AAI coder, since your coding is reliable only three ways. This means that you can code data for the organized categories but will have to get a certified coder to code "U" for any cases you undertake.

Probably the ideal route for you, if it is possible, is to attend a second AAI institute. Just about everyone we know who attends a second institute finds a tremendous increase in understanding of the AAI as a whole, and many people have gone a second time just out of interest. If this is what you would like to do, you could start coding for DsEF right now, but plan to take another institute, and go through the reliability check again starting around a year and a half from now.

Becoming reliable three-ways, as you have, is a significant accomplishment in itself. We hope you will take pride in this, and look forward to hearing from you at any time.

Yours with all good wishes,

Mary Main

Erik Hesse

Appendix 5

Distribution of data

Shapiro Wilk Test of distribution for the sample

Scale	K-S Test Statistic/ p value	Distribution	Scale	K-S Test Statistic/ p value	Distribution
Age	0.995/ 0.011	*NOT normal*	**Inventory of interpersonal difficulties (IIP 32) – Domineering/ controlling**	0.875/ 0.001	*NOT normal*
Quality of life (QOL) – Physical	0.983/ 0.503	Normal	**IIP 32 – Vindictive/ self centred**	0.866/ 0.001	*NOT normal*
QOL – Psychological	0.958/ 0.028	Not normal	**IIP 32 Cold/ distant**	0.918/ 0.001	*NOT normal*
QOL – Social	0.973/ 0.158	Normal	**IIP 32 Socially Inhibited**	0.944/ 0.003	*NOT normal*
QOL – Environmental	0.975/ 0.213	Normal	**IIP 32 Non assertive**	0.963/ 0.035	*NOT normal*
Beck Depression Inventory II Total	0.951/ 0.011	*Not normal*	**IIP 32 Overly accommodating**	0.969/ 0.071	Normal
Regulation of emotions questionnaire (REQ) – Internal function	0.970/ 0.125	Normal	**IIP 32 Self sacrificing**	0.948/ 0.005	*NOT normal*
REQ – Internal dysfunction	0.944/ 0.190	Normal	**IIP 32 Intrusive/ Needy**	0.876/0.001	*NOT normal*
REQ – external function	0.962/ 0.048	*NOT normal*	**IIP 32 Total score**	0.975/0.164	Normal
REQ – external dysfunction	0.893/0.001	*NOT normal*	**Adolescent Coping Scale (ACS) – general Problem solving**	0.982/ 0.662	Normal
Social support Questionnaire (F-SZOU) – Social strain	0.965/ 0.076	Normal	**ACS – general Reference to others**	0.950/ 0.042	*Not normal*
F-SZOU – Positive social support	0.967/ 0.091	Normal	**ACS – general Non productive coping**	0.882/ 0.001	*Not normal*
F-SZOU – Expectations of others	0.961/ 0.049	*NOT normal*	**ACS – specific Problem solving**	0.971/ 0.281	Normal
F-SZOU - Reciprocity	0.945/ 0.008	*NOT normal*	**ACS – specific Reference to others**	0.967/ 0.205	Normal
			ACS – specific Non productive coping	0.975/ 0.401	Normal